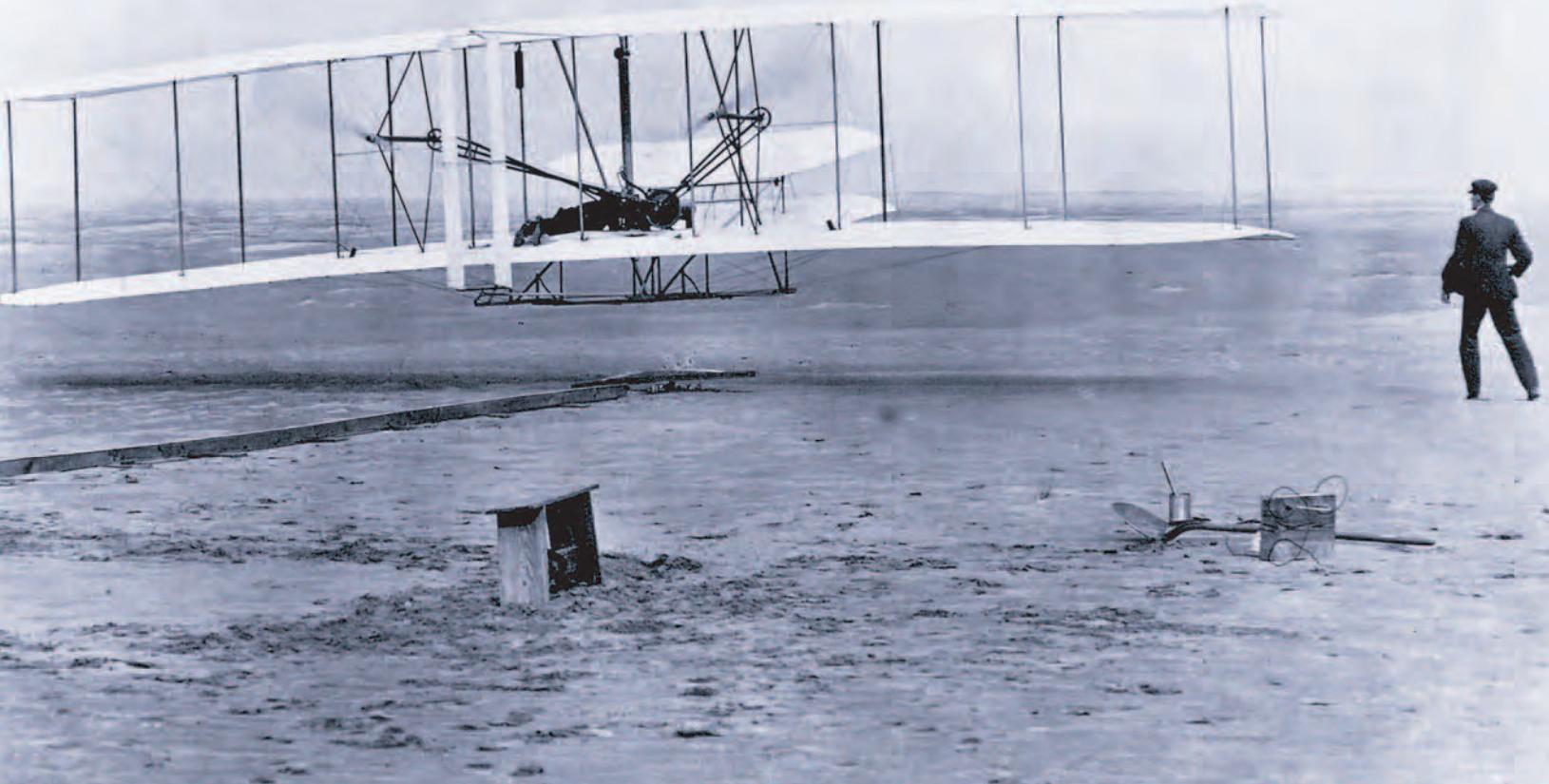


A Reissue of  
A Chronology Commemorating  
the Hundredth Anniversary of the

**BIRTH OF ORVILLE WRIGHT • AUGUST 19, 1871**

By Arthur George Renstrom

**WILBUR & ORVILLE      WRIGHT**



# **WILBUR & ORVILLE WRIGHT**

**A Reissue of  
A Chronology Commemorating the Hundredth Anniversary of the  
BIRTH OF ORVILLE WRIGHT • AUGUST 19, 1871**

**By Arthur George Renstrom**

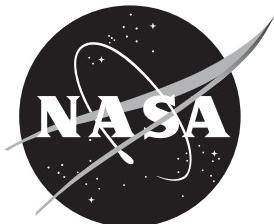
**A Joint Publication of the U.S. Centennial of Flight Commission  
and the National Aeronautics and Space Administration**

**Monographs in Aerospace History, Number 32**

**September 2003**

**NASA Publication SP-2003-4532**

National Aeronautics and Space Administration  
Office of External Relations  
NASA History Office  
NASA Headquarters  
Washington, DC 20546



---

On the cover: *The classic photograph of the first powered flight at Kitty Hawk, North Carolina, on December 17, 1903. Orville Wright is on the airplane; older brother Wilbur looks on from the sidelines.*

Library of Congress Cataloging in Publication Data

Renstrom, Arthur George, 1905–1991

Wilbur & Orville Wright: a chronology: commemorating the hundredth anniversary of the birth of Orville Wright, August 19, 1871/compiled by Arthur G. Renstrom.

p. cm.—(monographs in aerospace history; no.) (NASA history series) (NASA SP; 2003-4532)

Includes bibliographical references and index.

1. Wright, Orville, 1871–1948—Chronology. 2. Wright, Wilbur, 1867–1912—Chronology. 3. Aeronautics—United States—History—Chronology. I. Title. II.

Series. III. Series: NASA history series IV. NASA SP; 4532.

TL540.W7R46 2003  
629.13'0092'273—dc21

[B] 2003051363



## Foreword

During the year 2003, hundreds of events will mark the one-hundredth anniversary of the Wright brothers' historic first flights at Kitty Hawk, North Carolina. The centennial year will witness exhibitions, lectures, television documentaries, films, air shows, flight recreations of Wright aircraft, the issuing of postage stamps and medals, the publication of dozens of new books and articles, and numerous other commemorative activities. One of these events, although not likely to make the evening news, is among the most important of all in terms of a lasting contribution to the observance of this ultimate aviation milestone: the reprinting of Arthur G. Renstrom's *Wilbur & Orville Wright: A Chronology Commemorating the Hundredth Anniversary of the Birth of Orville Wright, August 19, 1871*.

Since its appearance in 1975, *Wilbur & Orville Wright: A Chronology* has become indispensable to students and authors concerned with the life and work of the famous brothers. No doubt every book on the subject published in the last quarter century, including three of my own, was written with this treasure close at hand. This volume is far more than a simple compilation of dates and facts. Renstrom was a master reference librarian and bibliographer with a passion for aviation and the Wright brothers. He brought his considerable research skills to bear on the topic, and the result is a richly detailed, ever-informative, often entertaining walk through the lives and achievements of these two extraordinary individuals. Renstrom was not content to offer a date with a one-line tidbit. His entries are brimming with information. This is a highly readable reference work that, believe or not, can be enjoyably read from cover to cover. The project was clearly a labor of love by a talented professional.

During most of the last twenty years, I have been privileged to be the curator of the 1903 Wright Flyer at the Smithsonian Institution's National Air and Space Museum. The position brings a steady stream of inquiries about the Wright airplane and the endlessly fascinating brothers who created it. I do not know how I would have done this job without Renstrom's superb volume on my bookshelf. It is the first place I go to check anything on the Wright brothers, and I typically find what I am looking for in its pages.

Arthur Renstrom also published two other classic reference works on the Wright brothers: *Wilbur & Orville Wright: A Bibliography Commemorating the Hundredth Anniversary of the Birth of Wilbur Wright, April 16, 1867*, in 1968 (an updated revision was published by the National Aeronautics and Space Administration in 2002) and *Wilbur & Orville Wright, Pictorial Materials: A Documentary Guide* in 1982, completing a series of research tools for which there are few peers on any subject. He was also part of the team that produced the landmark two-volume compilation of the Wrights' letters, notebooks, and diaries in 1953, *The Papers of Wilbur and Orville Wright*, edited by Marvin W. McFarland. Renstrom's contribution to the documentation and preservation of the Wright story is a lasting legacy that will serve researchers, students, and general enthusiasts for generations to come. In this busy, high-profile anniversary year, the reprinting of a nearly thirty-year-old reference book may seem a mundane and quiet contribution to the celebration surrounding the Wright brothers' world-changing achievement, but it is perhaps one of the most important. The U.S. Centennial of Flight Commission and NASA are to be commended for their foresight.

Peter L. Jakab  
Chairman, Aeronautics Division  
National Air and Space Museum  
Smithsonian Institution  
July 4, 2003

## Preface

Since 1949, when the Wright papers were given to the Library of Congress by the Orville Wright estate, the Library has paid tribute to the Wright brothers on several occasions.

To celebrate the 50th anniversary of powered flight, a two-volume edition of *The Papers of Wilbur and Orville Wright, Including the Chanute-Wright Letters and Other Papers of Octave Chanute* (New York: McGraw-Hill Book Company, 1953) was published under the sponsorship of Oberlin College. The Wrights' letters, diaries, notebooks, and other records of their scientific and technical work in inventing and perfecting the airplane were edited at that time by Marvin W. McFarland of the Library's Aeronautics Division.

A subsequent anniversary was observed by the Library with the publication of *Wilbur & Orville Wright: A Bibliography Commemorating the Hundredth Anniversary of the Birth of Wilbur Wright, April 16, 1867* (Washington: Library of Congress, 1968), listing more than 2,000 printed and audiovisual research materials on the Wright brothers.

Commemorating the 100th anniversary in 1971 of the birth of Orville Wright, the Library here presents a chronology and flight log through which the fortunes of the Wright brothers and their flying machines may be traced: their early trials, with little of the encouragement of public notices; the growing interest in their work by the time they exhibited their airplane and technique for the Army in 1908; their demonstration flights abroad in 1908 and 1909, which brought them public acclaim and meetings with kings; their triumphant return to the United States, with the presentation of medals by the President and a memorable two-day homecoming celebration in Dayton; the period of public exhibition flying; Wilbur's unexpected death from typhoid fever; the protracted Wright patent litigation with Glenn H. Curtiss; the sale of the Wright Company in 1915; the subsequent retirement of Orville from public life, his lengthy controversy with the Smithsonian Institution, and awards to him of numerous medals and honorary degrees; and finally, the continuing tribute tendered the Wrights in anniversary celebrations and testimonial dinners and the building and dedication of memorials and monuments in their honor.

The nucleus of the present publication was an article entitled "Wright Chronology," contributed by the compiler of this work to the July 1953 issue of the aviation journal *Aero Digest*, a commemorative issue marking the 50th anniversary of powered flight by the Wright brothers. Prepared in connection with tasks associated with *The Papers of Wilbur and Orville Wright*, it consisted of 366 individual entries and covered the period from the birth of Wilbur Wright on April 16, 1867, through the Wright golden anniversary celebrations on December 17, 1953.

The present chronology comprises over 2,600 individual entries, extending the period covered through August 19, 1971, the hundredth anniversary of the birth of Orville Wright. The information presented is based upon an extensive survey of the Library's unique Wright collection, as well as other related documentary sources in the Library. One of the primary sources for the later years was the extensive chronological scrapbook collection maintained by the Wright brothers. Initiated

by them in 1902, when the Wrights were conducting gliding experiments at Kitty Hawk, the scrapbooks were maintained in later years largely by Mabel Beck, secretary to Orville for many years, who also faithfully presided over the voluminous files and helped preserve the valuable documents for future historians. Additions to the scrapbooks ceased on February 29, 1948, shortly after Orville's death on January 30 of that year. A related source was the Library's Hart O. Berg collection, including 14 scrapbooks of newspaper clippings on the Wrights.

Supplementing the main chronology is a flight log, in which an attempt has been made to record the flights of Wilbur and Orville from 1900, when their first gliding experiments were carried out at Kitty Hawk, through 1918, when Orville made his last flight as a pilot at Dayton on May 13, flying a Wright 1911 model aircraft. A total of 21 detailed flight logs are presented. So far as is known, no previous attempts have been made to record the Wright flights systematically. Wright documents have served as primary sources for 12 series of flights: 1900, Orville's letter from Kitty Hawk to Katharine Wright, dated October 14; 1901, Wilbur Wright's Diary A; 1902, Orville Wright's Diary B and Orville Wright's Notebook C; 1903, Orville Wright's Diary D; 1904, Wilbur Wright's Diary E, 1904–1905; 1905, Wilbur Wright's Diary F; 1908, Wilbur Wright's Diary T (Kitty Hawk) and Signal Corps "Log of Wright Aeroplane" (Fort Myer, Va.); 1909, Signal Corps "Log of Wright Aeroplane" (Fort Myer, Va.) and Orville Wright's Diary X (Tempelhof Field, Berlin); 1910, Orville Wright's Diary Y; and 1911, Orville Wright's Diary V.

The Wright brothers' scrapbooks and contemporary accounts in American and European newspapers and in aviation and technical journals were the primary sources for the remaining Wright flight logs. No diaries or notebooks were maintained by Wilbur in France in 1908 recording his flights at the Hunaudières Race Course and Camp d'Auvours at Le Mans, or in 1909 at Pont-Long, at Pau, and at Centocelle Flying Field, Rome. Nor did he keep detailed records of his flights at Governors Island, N.Y., and at College Park, Md., in 1909. Likewise, no accurate and detailed records survive of Orville's numerous flights at Dayton during the period 1910–18. Consequently, it is exceedingly difficult to record all flights for these periods, and no claim is made for completeness. Furthermore, accurate time, distance, and altitude records for these years are frequently unavailable.

A comprehensive index of persons, institutions, and geographic names cited in the publication is provided to facilitate use of the chronology.

The amount of pertinent material uncovered as the preparation of the chronology progressed resulted in an enlargement of its original scope, and consequently it was not possible to achieve publication in the 1971 anniversary year.

## Contents ▾

Foreword .....	iv
Preface.....	v
Chronology.....	1
1867 .....	1
1903 .....	6
1910 .....	26
1920 .....	40
1930 .....	49
1940 .....	57
1950 .....	62
1960 .....	65
1970 .....	66
Flight Log .....	69
1900 Kitty Hawk, N.C. ....	69
1901 Kitty Hawk, N.C. ....	69
1902 Kitty Hawk, N.C. ....	71
1903 Kitty Hawk, N.C. ....	75
1904 Huffman Prairie, Dayton, Ohio .....	77
1905 Huffman Prairie, Dayton, Ohio .....	82
1908 Kitty Hawk, N.C. ....	84
1908 Hunaudières Race Course, Le Mans, France .....	86
1908 Camp d'Auvours, Le Mans, France .....	87
1908 Ft. Myer, Va. ....	93
1909 Pont-Long, Pau, France .....	94
1909 Centocelle Field, Rome, Italy .....	97
1909 Ft. Myer, Va. ....	100
1909 Tempelhof Field, Berlin, Germany .....	101
1909 Governors Island, N.Y. ....	102
1909 Bornstedt Field, Potsdam, Germany .....	103
1909 College Park, Md. ....	103
1910 Montgomery, Ala. ....	106
1910 Simms Station, Dayton, Ohio .....	108

1911 Kitty Hawk, N.C. . . . .	115
1911–1918 Simms Station, Dayton, Ohio . . . . .	118
<b>The NASA History Series .....</b>	<b>121</b>

# Chronology

**1867**

**APRIL 16.** Wilbur Wright born on a farm near Millville, eight miles east of New Castle, in Henry County, Ind.

He was the son of the Rev. Milton Wright, a minister and later bishop of the United Brethren Church in Christ, and Susan Catherine Koerner. Besides his younger brother, Orville, and his sister, Katharine, there were two older brothers, Reuchlin (born March 17, 1861, in Grant County, near Fairmont, Ind.), and Lorin (born November 18, 1862, in Fayette County, Ind.); two other children, twins, died in infancy.

Bishop Wright was born November 17, 1828, in Rush County, Ind. He attended country schools there and for a short time was a student at Hartsville College, Ind. In 1853 he received a license to preach from the White River Conference of the Church of the United Brethren in Christ and was ordained August 1856 at Abington, Ind. He was the principal of a denominational school in Oregon from 1857 to 1859.

On November 24, 1859, he married Susan Catherine Koerner, daughter of John G. Koerner, wagon and carriage maker. She attended Hartsville College for a time and was especially successful in mathematical studies.

Between 1859 and 1869 Milton Wright was engaged for a short time in teaching and afterward in preaching. In 1869 he was made editor of the Religious Telescope, published in Dayton, Ohio, continuing in that capacity for eight years. He was elected bishop on May 10, 1877, at the 17th general conference of the Church of the United Brethren in Christ at Westfield College, Westfield, Ill. In 1878 he moved from Dayton to Cedar Rapids, Iowa. In 1881 he moved to Richmond, Ind., where, in conjunction with his work as a presiding elder, he edited the Richmond Star. In 1884 he again made Dayton his home, remaining there after his retirement in 1905 and until his death in 1917.

**1868**

**SEPTEMBER.** Wright family moves to Hartsville, Bartholomew County, Ind., following Rev. Milton Wright's appointment as pastor of Hartsville College.

**1869**

**SPRING.** Wright family moves to Dayton, Ohio, when Milton Wright becomes editor of the Religious Telescope, a United Brethren weekly, living in a house on Third Street till about November, then moving to a brick house on Second Street, where the family resided until April 1871, when a house was purchased at 7 Hawthorne Street on the West Side.

**1871**

**AUGUST 19.** Orville Wright born at 7 Hawthorne Street, Dayton, Ohio.

**1874**

**AUGUST 19.** Katharine Wright born at Dayton, Ohio.

Katharine Wright was graduated from Oberlin College in 1898 and later taught at the Steele High School in Dayton. She served as secretary of the Dayton Association of College Women and was secretary of her college class. She resided at the Wright Dayton home until her marriage in 1926 to Henry J. Haskell, editor of the Kansas City Star and an Oberlin College classmate.

**1878**

Bishop Milton Wright, on a return from a short trip on church business, brings home a toy Pénaud-type hélicoptére, arousing the boys' first interest in the problem of flight.

**JUNE.** Wright family moves from Dayton to Cedar Rapids, Iowa.

**1881**

**FEBRUARY 13.** Wilbur, at age 13, in Cedar Rapids, Iowa, joins United Brethren Church, Rev. Marion R. Drury, pastor.

**APRIL.** Orville writes letter to his father, who is away on church business.

The earliest surviving document in the Wright Collection in the Library of Congress, it reads:

Dear Father

I got your letter today. My teacher said I was a good boy today. We have 45 in our room. The other day I took a machine can and filled it with water then I put it on the stove. I waited a little while and the water came squirting out of the top about a foot. The water in the river was up in the cracker factory about half a foot. There is a good deal water on the Island. The old cat is dead.

Your son

Orville

**JUNE.** Wright family moves to Richmond, Ind.

It was here that Orville first took up kite-building, both as a sport and as a business.

**1884**

**JUNE.** Wright family returns to Dayton, living in a rented house for 16 months until expiration of lease on their home at 7 Hawthorne Street, which had been rented on family's departure from Dayton in 1878.

Wilbur, though he had completed his fourth year of high school in Richmond, declines to go back to collect his diploma at the June commencement.

## 1885

**SEPTEMBER.** Orville, although lacking certificate of completion of sixth grade in Richmond, Ind., enters Dayton Seventh District grade school in seventh grade despite attempts by school authorities to start him in sixth grade.

Wilbur takes special "postgraduate" course at Dayton Central High School, continuing study of Greek and starting trigonometry.

**OCTOBER.** Wright family occupies 7 Hawthorn Street in Dayton, the house where Orville was born in 1871 and where Wilbur was to die in 1912.

## 1886

Orville (with Ed Sines, neighbor and boyhood friend) starts The Midget, a school newspaper, with new press given him by his brothers Lorin and Wilbur and with type given by his father.

**OCTOBER 9.** "Ten Boys Club" organized at home of Reuchlin Wright in Dayton, with Wilbur the 10th and youngest member. Lorin and Reuchlin also members.

## 1887

**SEPTEMBER.** Orville enters Dayton Central High School.

## 1889

**MARCH 1.** Orville, as editor and publisher, commences publication of the weekly West Side News.

He was to maintain an active interest in printing and publishing throughout the period 1889–96.

**JULY 4.** Susan Catherine Wright, mother of Wright brothers, dies at age 58. Burial is in Woodland Cemetery in Dayton.

A marker was erected at her birthplace in Hillsboro, Virginia, by the Rivanna Garden Club of Charlottesville, Virginia, on December 17, 1929.

## 1890

**APRIL 30.** Orville, with Wilbur as partner, converts West Side News into evening newspaper, The Evening Item.

Publication was suspended in August.

**SEPTEMBER.** Orville enters final year of high school, not working for diploma but as special student in Latin. His interest in the printing business prompted him to leave school before graduating.

**DECEMBER 13.** Paul Laurence Dunbar, high school classmate of Orville's, starts the Tatler, which Orville prints for him.

About this time Dunbar chalked on the shop wall the following quatrain:

Orville Wright is out of sight  
In the printing business.  
No other mind is half so bright  
As his'n is.

## 1892

Orville buys European-type "safety" bicycle, a Columbia, for \$160. Wilbur buys Eagle bicycle for \$80.

**DECEMBER.** Orville and Wilbur rent 1005 West Third St. as bicycle shop, stocking it with such well-known makes as the Coventry Cross, Halladay-Temple, Warwick, Reading, Smalley, Envoy, and Fleetwing, and adding repair facilities.

They were to continue active in the bicycle manufacturing and repair business from 1892 to early 1907. This modest business provided the funds that enabled them to carry out all their early aeronautical experiments, including the power flights of 1903, 1904, and 1905.

## 1893

Bicycle shop moves to larger quarters, 1034 West Third St. Wilbur and Orville attend The World's Columbian Exposition in Chicago, May 1–October 30, where, among other attractions, the aeronautical exhibit drew their attention.

## 1894

**OCTOBER 20.** Wilbur and Orville commence weekly magazine Snap Shots.

## 1895

Bicycle shop moves to 22 South Williams St. Orville invents calculating machine that will multiply as well as add.

## 1896

Wrights begin to manufacture their own brand of bicycles, first being the Van Cleve and later the lower priced St. Clair.

**SPRING.** Wilbur and Orville experiment with gas engine.

**MAY 16.** Wrights put on sale their "Wright Special," another bicycle of their own manufacture.

**JULY 2–4.** Wright Cycle Co. is one of the contributors to and participants in the 16th Annual Meet of the Ohio Division, League of American Wheelmen, held in Dayton.

The Wrights were members of the league.

**AUGUST–OCTOBER** Orville seriously ill with typhoid fever.

**AUGUST 10.** Otto Lilienthal, German engineer and aeronautical pioneer, dies in Germany, following injuries suffered in crash near Rhinow the previous day while testing his latest single-surface glider, with adjustable horizontal tail.

Although Wilbur withheld the news of Lilienthal's crash until after Orville's convalescence, the tragedy served to stimulate anew the interest of the brothers in the work of Lilienthal and others who had tried to solve the problem of human flight. The

Wrights' curiosity may have been aroused, in a passive way, as early as September 1894 by an article on Lilienthal entitled "The Flying Man" in McClure's Magazine, to which they had access in their home at that time.

## 1897–1898

While engaged in the bicycle manufacturing and repairing business, Wrights focused their attention on the problems of mechanical and human flight. Extensive reading and study of bird flight and of Lilienthal's gliding trials convince the brothers that human flight is possible and practical. They decide to conduct some limited experiments of their own.

## 1899

**MAY 30.** Having read of the work of Cayley, Pénaud, and Marey in books from his father's library, Wilbur writes the Smithsonian Institution inquiring about additional publications on aeronautical subjects.

**JUNE 2.** Richard Rathbun, assistant secretary of the Smithsonian Institution, sends the Wrights a list of works and four Smithsonian pamphlets on the subject of aerial navigation, which further stimulate the Wrights' interest in gliding as a sport.

**JUNE 14.** Wilbur acknowledges receipt of Rathbun's letter and Smithsonian pamphlets and orders copy of Samuel P. Langley's Experiments in Aerodynamics.

**JULY–AUGUST.** Wrights construct and Wilbur tests and flies a biplane kite measuring five feet from tip to tip and about 13 inches from front to rear, in which wing warping was achieved by the manipulation of four cords leading to the ground. The kite flying is witnessed by 10 or 12 schoolboys, including Frederick W. Fansher, John D. Reiniger, and Walter Reiniger.

The kite was built to test the idea of warped wing lateral control and followed a demonstration by Wilbur early in July in which he used an open-end pasteboard box and pressed the corners together so that the upper and lower surfaces were given a spiral twist, presenting the top and bottom surfaces of the box at different angles on the right and left sides. The successful kite experiment encouraged the Wrights to proceed with the building of a man-carrying machine embodying this principle. The kite hung on a wall of a room over their store until destroyed about 1905 to make room for an upstairs office.

**NOVEMBER 27.** Wrights write the U.S. Weather Bureau for information on a suitable place to conduct their flying experiments.

**DECEMBER 4.** Willis L. Moore, chief of the U.S. Weather Bureau, sends Wrights data on wind velocities in various locations of the country, enclosing marked copies of the Monthly Weather Review for August and September 1899.

The September issue also contained an article by Prof. Cleveland Abbe entitled "Preliminary Results of Weather Bureau Kite Observations [carried out by Charles F. Marvin and H. C. Frankenfield] in 1898."

## 1900

**FEBRUARY.** Katharine Wright, occupied in teaching at Steele High School, engages Carrie Kayler (later Carrie Kayler Grumbach), age 14, as a helper in the Wright home. She was to stay on as a member of the Wright household for nearly half a century, until after Orville's death in January 1948.

**MAY 13.** Wilbur writes to Octave Chanute—civil engineer, aerial experimenter, and author of the book Progress in Flying Machines (1894), which was noteworthy in presenting the first technical assessment of the aviation pioneers—beginning an important friendship and correspondence that lasted until May 1910, several months before Chanute's death on November 23. In his letter Wilbur fully describes the Wright system of control as used in their kite experiment.

**AUGUST 10.** Wilbur writes to Chanute telling of plans to construct full-size glider and enlisting his aid in obtaining necessary materials unavailable in Dayton.

**AUGUST 16.** Joseph J. Dosher, in charge of the Kitty Hawk Weather Bureau Station, supplies data on prevailing winds and on nature of the region in a response to Wilbur's letter of August 3.

**AUGUST 18.** William J. Tate, neighbor of Dosher, also writes the Wright brothers recommending Kitty Hawk as a suitable place to conduct experiments in "scientific kite flying."

**SEPTEMBER 6.** Wilbur leaves Dayton for Kitty Hawk, arriving in Elizabeth City on September 11 by boat and arrives at Kitty Hawk on September 13.

**SEPTEMBER 13–OCTOBER 2.** Wilbur and later Orville stay with William J. Tate in Kitty Hawk until their camp is made ready.

**SEPTEMBER 14.** Wilbur commences assembly of Wrights' first experimental double-deck glider having a surface of 177 square feet. The glider is completed by September 23.

**SEPTEMBER 24.** Orville leaves Dayton for Kitty Hawk, arriving September 28.

**OCTOBER.** Wrights commence active experiments. Flying their glider both as a kite and as a man-carrying glider to test out flight theories and to practice with a view to solving the problem of equilibrium. About a dozen free flights are made. The total time in the air was only about two minutes. William J. Tate is present and assists the brothers in many of their experiments, which are concluded about the end of the month.

**OCTOBER 4.** In preparation for gliding experiments Wilbur and Orville set up camp in a tent about a half mile from home of William J. Tate.

**OCTOBER 10.** Wright 1900 glider upset by wind on Hill of the wreck.

Three days were spent in its repair.

**OCTOBER 23.** Wrights depart from Kitty Hawk, leaving glider at camp. The only remaining piece of the 1900 glider is destroyed by a 93-mile gale in July 1901.

## 1900-1901

**WINTER.** Wrights proceed with plans for larger glider of same general design as the first but with considerably more area, 290 square feet, for greater lifting power.

The glider would be flown as a kite, with an operator aboard, and in the kind of winds they could usually expect based on their experience in 1900.

## 1901

**MAY 12.** In a letter to Octave Chanute, Wilbur tells of plans for further experiments at Kitty Hawk in September and October and of proposed changes in their new glider. He invites Chanute to visit them at their camp.

**JUNE 26-27.** First meeting with Octave Chanute, authority on aerial navigation, occurs when he visits Wrights in Dayton.

**JULY.** Wilbur's articles "Angle of Incidence," published in the Aeronautical Journal, and "Die Wagerechte Lage Wahrend des Gleitfluges," published in the Illustrerte Aeronautische Mitteilungen, are the first aeronautical writings of the brothers to appear in print.

**JULY 7.** Wrights start for Kitty Hawk, arriving there July 10.

**JULY 9.** Storm demolishes Wright 1900 glider, which was left at Kitty Hawk at the conclusion of experiments there in August 1900.

**JULY 18.** On recommendation of Chanute, for whom he was building a glider, Edward C. Huffaker of Chuckey City, Tenn., joins Wrights at Kitty Hawk to test Chanute glider, remaining until August 18.

Huffaker had worked in the Smithsonian Institution as an assistant to Samuel P. Langley in his aeronautical work from 1895 to 1899.

**JULY 25.** George A. Spratt, of Coatesville, Pa., on recommendation of Chanute joins Wrights at Kitty Hawk and participates in their activities until his departure August 16.

Spratt was recommended by Chanute because of his interest in aeronautics and because his medical training might be needed in the event of injury to the Wrights in the isolated area used to carry out their experiments.

**JULY 27.** Wright 1901 glider assembled and tried for the first time.

Between 50 and 100 flights are made in 1901, ranging in distance from 20 feet to nearly 400 feet, with many covering 300 feet or more.

**AUGUST 4-11.** Chanute visits Wrights at Kill Devil Hill and witnesses some of their gliding experiments.

**AUGUST 20.** Wrights leave Kitty Hawk, arriving home in Dayton August 22.

**AUGUST 29.** Chanute writes Wilbur asking him to deliver address before the Western Society of Engineers in Chicago and in reply, September 2, Wilbur accepts.

**SEPTEMBER.** Wilbur and Orville share in proceeds of sale of 160-acre farm at Casey, Iowa, originally given to them by their father and jointly owned by the Wright brothers, which is sold by Reuchlin Wright.

**SEPTEMBER 18.** Wilbur addresses Western Society of Engineers on Wright 1900 and 1901 gliding experiments. He compares results with those obtained by earlier investigators and indicates that previously published figures relating to air pressures on curved surfaces appeared to be in error. Before the lecture, entitled "Some Aeronautical Experiments," Wilbur is entertained by Chanute at his home in Chicago and views his study room and collection of models of flying machines.

**OCTOBER 6.** Wrights conduct tests of model airfoils mounted on a bicycle wheel placed horizontally at front of one of their bicycles.

**SEPTEMBER-NOVEMBER.** Wrights design single-cylinder, 4-stroke-cycle, stationary powerplant, which was utilized in construction engine and airplane parts from 1902 through 1908 and for determining the power output of their early flight engines.

The engine was restored under the direction of Charles Taylor and installed April 16, 1938, in Greenfield Village, Dearborn, Mich., together with the shop machinery it operated.

**OCTOBER-DECEMBER.** Wrights conduct further tests of airfoils with wind tunnel and pressure-testing balances of their own design, becoming the first investigators to compile tables of figures from which it was possible to design an airplane that would fly.

**DECEMBER.** Wilbur's Chicago speech of September 18 printed in the Journal of the Western Society of Engineers.

Few other articles on the subject of flight have been so frequently reprinted or widely quoted.

## 1902

**JANUARY 5.** Wilbur sends Chanute data sheets resulting from wind tunnel tests with instructions for making computations.

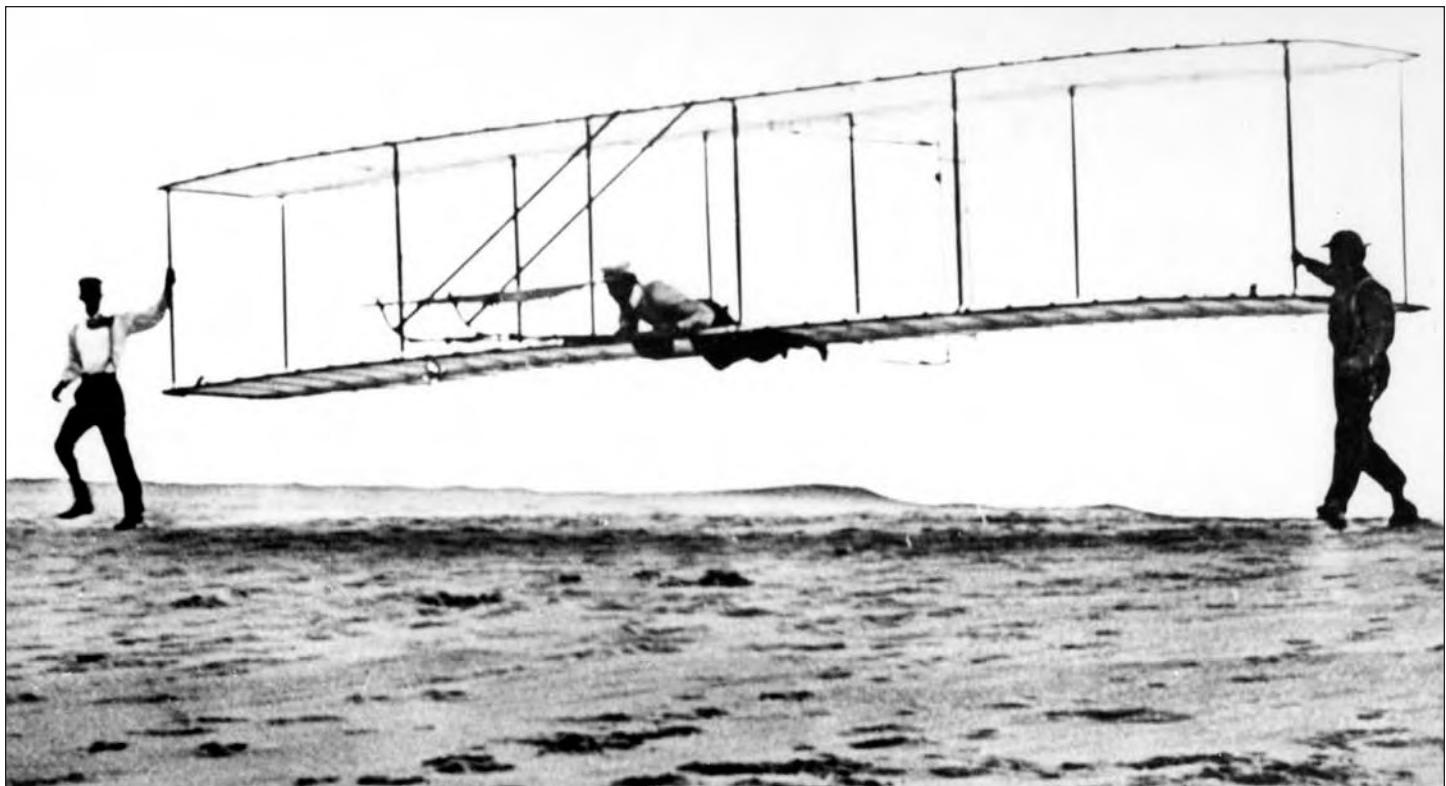
**JANUARY 19.** Wilbur sends Chanute photograph and description of Wright pressure-testing instrument, i.e., the lift balance used in the Wright wind tunnel.

**FEBRUARY 22.** Scientific American publishes account of 1901 gliding experiments by Wrights, based on Wilbur's paper "Some Aeronautical Experiments."

**MARCH 18-21.** Wilbur goes to Huntington, Ind., to defend his father in case involving a layman's misuse of church funds.

Subsequent trips were made in 1902 by Wilbur to Huntington on May 9-15, on August 5-9, and on November 24.

**AUGUST.** Wrights complete construction of parts for their 1902 glider, designed on the basis of the wind tunnel calculations.



*Historic photo of the Wright brothers' third test glider being launched at Kill Devil Hills, North Carolina, on October 10, 1902.*

Wilbur uses family sewing machine to sew needed cloth wing covering on which pattern has been marked by Orville.

The wings of this machine measured 32 feet from tip to tip, and five feet from front to rear. The wing area totaled 305 square feet.

**AUGUST 25.** Wrights leave for Kitty Hawk, arriving in Norfolk and Elizabeth City, N.C., on August 26 and at the Kitty Hawk camp on August 28.

**AUGUST 29–SEPTEMBER 7.** Orville and Wilbur construct their camp, drill well, and obtain needed food supplies and equipment.

**SEPTEMBER 8–19.** Wright 1902 glider, a biplane with forward monoplane elevator and a fixed double rear fin, assembled and made ready for flying.

**SEPTEMBER 15.** The 1901 glider is dismantled and destroyed to make room for a new glider. The uprights are used in the new machine.

**SEPTEMBER 19–OCTOBER 24.** The Wrights make 700–1,000 glides, increasing their record for distance to 622 1/2 ft., for time to 26 seconds, and for angle of descent to 5° for a glide of 156 ft.

Orville stated in a deposition given in Dayton on January 13, 1920, in a patent suit that the flights of 1902 demonstrated lateral stability as well as the fact that their tables of air pressure derived from their wind tunnel tests enabled them to calculate in advance the performance of their flying machine.

**SEPTEMBER 30.** Lorin Wright arrives at Kitty Hawk from Dayton for visit with brothers, remains until October 13, and witnesses some of the gliding experiments.

**OCTOBER 1.** George A. Spratt arrives at Kitty Hawk to participate for second time in Wright gliding experiments, and remained until October 20.

**OCTOBER 4, 6.** Wrights modify their 1902 glider by replacing fixed double rear fin with a rear rudder linked with the wing-warping control to counteract warp-drag.

**OCTOBER 5.** Chanute and his assistant, Augustus M. Herring, arrive at Kitty Hawk to join Wrights in gliding experiments.

Chanute and Herring remained until October 14 and conducted unsuccessful tests on the multiple-wing machine built by Charles Lamson for Chanute, which had arrived in camp on September 24.

**OCTOBER 18.** In his first letter to the Wrights, Samuel Pierpont Langley, secretary of the Smithsonian Institution, inquires about experiments at Kitty Hawk and particularly about their use of "special curved surfaces and the like."

**OCTOBER 28.** Wrights leave Kitty Hawk, arriving in Dayton on October 31.

**NOVEMBER.** Orville plans to construct a new testing machine with intent to conduct new series of measurements to aid in design of their airplane.

**DECEMBER.** Wrights conduct propeller experiments and begin construction of their 1903 four-cylinder engine.

**DECEMBER 15.** Wrights commence plans for a new flying machine to be equipped with motor and propellers by conducting propeller experiment using 28-inch diameter screw.

**DECEMBER 24.** Patrick Alexander, prominent member of Aeronautical Society of Great Britain, calls on Wrights in Dayton with letter of introduction from Chanute.

## 1903

Early in 1903 Wrights build a second wind tunnel, 2 feet by 2 feet by 8 feet, to ensure greater accuracy in measurements than obtained in tests made in the 1901 wind tunnel.

**FEBRUARY 12.** Wrights test newly built airplane motor for first time.

**FEBRUARY 13.** Motor body and frame broken during test.

**MARCH 6.** Propeller estimates for 1903 propellers completed.

**MARCH 23.** Wright brothers apply for patent on their flying machine (patent issued May 22, 1906).

**APRIL 2.** Octave Chanute, in illustrated lecture before Aéro-Club de France in Paris, tells of the Wright brothers' gliding experiments of 1901 and 1902.

In the August 1903 issue of L'Aerophile, Chanute published an article on the same subject with photographic illustrations, scale drawings, and structural details on the Wright 1902 glider. Chanute's lecture and subsequent reports and articles precipitated a revival of interest in aviation in Europe.

**APRIL 16.** Wilbur Wright 36 years old.

**APRIL 20.** Wright brothers receive from foundry a new aluminum casting for engine of 1903 machine.

**MAY 2.** Orville suffers injury when eye is struck by piece of emery.

On May 4 Charles Taylor removed an embedded fragment from Orville's eye; the doctor later removed additional fragments.

**JUNE 6.** Following return from Europe in May, Chanute visits Wrights in Dayton. He presents them with a Richard hand anemometer.

Wilbur reported in 1911 that on this visit Chanute informed the brothers he was ending his active gliding experiments because "he had come to the conclusion that whatever the final merits of the two systems [Wright and Chanute] might be, the first success would be obtained in all probability by our system, i.e., human control, rather than by his own system, i.e., automatic control."

**JUNE 7.** In letter to George A. Spratt, Orville tells of plans for powered machine.

**JUNE 18.** Wilbur informs Chanute in a letter that "Our engine develops at the brake 15.6 horsepower and we are convinced that this is very close to what we will be able to reach as a maximum," indicating early completion of engine required for powered flight.

**JUNE 24.** Wilbur delivers second lecture before Western Society of Engineers, "Experiments and Observations in Soaring Flight,"

giving account of Wright gliding experiments at Kitty Hawk in September and October 1902.

**AUGUST.** Wilbur's lecture of June 24 published in Journal of the Western Society of Engineers.

**AUGUST 19.** Orville 32 years old.

**SEPTEMBER 12.** Wright brothers, as agents, order from St. Louis Motor Carriage Co. an automobile "tonneau" for Albert R. Cotteral, of Cotteral & Gaddis, General Contractors, Dayton, which they deliver to him on September 22.

**SEPTEMBER 23.** Wrights leave Dayton for Kitty Hawk, arriving there September 25.

**SEPTEMBER 26.** Wrights repair damaged shed that housed their 1902 glider and commence construction on a new building at Kitty Hawk, completed on October 5, in which to assemble and house their new machine.

**SEPTEMBER 28.** 1902 glider renovated and experiments conducted for first time in 1903. Between 60 and 100 glides are made.

In a letter to Chanute dated October 1, Wilbur states that it was the finest day for practice the Wrights ever had.

**OCTOBER 3.** 1902 glider modified and performance improved by enlarging tail surface and changing method of attaching rudder to rear rudder frame.

**OCTOBER 9.** Wrights commence assembly of 1903 machine, following receipt on October 8 of parts shipped from Dayton.

**OCTOBER 23.** Dr. Spratt arrives at Kitty Hawk and participates in the Wright experiments for third time, departing from Kitty Hawk on November 6.

**OCTOBER 28.** Smithsonian Institution reprints from its 1902 annual report and distributes Wilbur's 1901 lecture, "Some Aeronautical Experiments," as Smithsonian Publication 1380.

**NOVEMBER 2.** Installation of engine on 1903 machine commenced.

**NOVEMBER 4.** The 1903 machine assembled and ready for launching except for mounting of propellers. Launching track completed.

**NOVEMBER 5.** New Wright airplane almost completed and assembled when propeller shafts break, requiring shipment to Dayton for repair and delaying further experiments.

Repaired shafts were returned on November 20.

**NOVEMBER 6.** Chanute arrives at Kitty Hawk to visit Wilbur and Orville, staying until November 12 and discussing his own and Wrights' plans for the next year.

**NOVEMBER 12.** Glider experiments are terminated because the dilapidated condition of the machine rendered it unsafe.

Over 200 glides were made during the period September–November.

**NOVEMBER 28.** Propeller shaft cracks in test, curtailing further tests while awaiting replacement.

**DECEMBER 3.** Orville returns to Dayton to obtain replacement for broken propeller shaft, the second time shaft had broken.

**DECEMBER 9.** Orville leaves Dayton for Kitty Hawk with new improved and larger spring steel propeller shaft, arriving back in Kitty Hawk on December 11.

**DECEMBER 14.** Wrights make first and unsuccessful attempt with power machine from slope of Big Kill Devil Hill, with Wilbur as operator. Machine stalls after 3 1/2 seconds in the air and settles to earth 105 feet below. Five men from Kill Devil Hill Life Saving Station present during test.

**DECEMBER 17.** Wilbur and Orville make world's first free, controlled, and sustained flights in power-driven, heavier-than-air machine. The four trial flights are witnessed by John T. Daniels, W. S. Dough, and A. D. Etheridge, from the Kill Devil Life Saving Station; W. C. Brinkley, of Manteo, and Johnny Moore, from Nags Head.

First trial by Orville 10:35 a.m. Time 12 seconds. Distance 120 feet. Speed between 7 and 8 miles per hour.

Second trial by Wilbur 11 a.m. Time approximately 12 seconds. Distance approximately 175 feet.

Third trial by Orville 11:40 a.m. Time 15 seconds. Distance a little over 200 feet.

Fourth trial by Wilbur 12 noon. Time 59 seconds. Distance 852 feet. With headwinds averaging 27 m.p.h., the fourth flight achieved a distance through the air of over half a mile. A photograph of the first successful flight was taken by John T. Daniels, one of the witnesses, with Orville's camera. Machine was wrecked by sudden gust of wind shortly after the fourth flight.

Orville's telegram to his father announcing successful flights transmitted by Joseph J. Dosher, then in charge of Weather Bureau Station at Kitty Hawk, to Weather Bureau Station in Norfolk, in charge of James Gray, who turned it over to Western Union for transmission to Dayton.

**DECEMBER 18.** First (inaccurate) accounts of successful flights of December 17 published in Norfolk The Virginian-Pilot, New York American, and Cincinnati Enquirer, as well as Dayton afternoon papers.

**DECEMBER 18–19.** 1903 machine and motor disassembled, packed, and shipped to Dayton. The 1902 glider is stored in the large camp building at Kitty Hawk.

The machine, in boxes, was stored for many years in a shed at the rear of the old Wright workshop and lay for several weeks in water and mud during the Dayton flood of March–April 1913. Subsequently, it was stored in a barn and, when this was torn down, in Orville's laboratory.

**DECEMBER 21.** Wrights leave Kitty Hawk, arriving back in Dayton December 23.

**DECEMBER 26.** Wilbur and Orville interviewed at home by Bertha Comstock, of the Chicago Tribune, and by J. D. Sliders, of the New York World.

**DECEMBER 31.** On reading of successful flights on December 17, Godfrey L. Cabot, wealthy and influential Boston businessman, writes Senator Henry Cabot Lodge that it would be "eminently desirable for the United States to interest itself in this invention with a view to utilizing it for war-like purposes." He also wrote the Wrights asking if their machine were capable of carrying a payload in the form of a 100-lb. sack of carbon black from his mine in West Virginia, over the countryside, often impassable in winter, to the nearest railhead, 16 miles away.

## 1904

**JANUARY 5.** Wrights issue statement to Associated Press, published January 6, to correct printed misinformation about December 17 flights.

**JANUARY 14.** Wrights write to Harry A. Toulmin, patent attorney in Springfield, Ill., for appointment to discuss pending patent application.

**JANUARY 22.** Wilbur goes to Springfield, Ill., to see Toulmin and places Wright patent case in his hands. Wilbur saw Toulmin again on February 4 to discuss foreign patent applications.

Chanute visits Wrights in Dayton to discuss rules for aeronautic competition scheduled for St. Louis World's Fair.

**FEBRUARY 4.** Independent magazine publishes forged account of the Wright flight entitled "Experiments of a Flying Man," using Wilbur Wright's signature without authorization.

On February 5 Wrights sent letters to the Independent demanding apologies and corrections. Independent published retraction to February 24 issue.

**FEBRUARY 17.** Orville and Wilbur travel to St. Louis to inspect grounds over which World's Fair aeronautic competition was to be held.

The Wrights decided not to exhibit an airplane at the fair, and the proposed race was subsequently cancelled.

**MARCH 8–16.** Wilbur again occupied with the United Brethren Publishing House case involving his father, and writes letters and travels to Huntington, Ind., in his behalf on March 15, returning to Dayton on March 16.

**MARCH 22.** Wrights apply for French patent on their airplane.

**MARCH 24.** Wrights apply for German patent on their airplane.

**APRIL–MAY.** Wrights construct an entirely new, heavier and stronger machine at Huffman Prairie, eight miles out of Dayton, with which they made long flights later in the year. A new motor is installed which furnished 18 horsepower, as compared with 12 or 13 horsepower in the 1903 machine.

**APRIL 15.** Wrights complete building of a wooden shed at Huffman Prairie to house their new, 1904 flying machine.

**MAY 5.** Wilbur writes Chanute that three-day trip to Huntington, Ind., in connection with Bishop Wright's church problems, has delayed work on their flying machine.

**MAY 23 and 25.** Wrights attempt flights with new machine at Huffman Prairie, but rain and insufficient wind prevent takeoff.

**MAY 26.** At Huffman Prairie, a large meadow of about 100 acres, Wrights try new machine for first time, Orville flying about 25 feet.

Between this date and December 9, when their last flight of the season was made, the Wrights made 105 starts, with total flying time of 49 minutes, enabling Wilbur and Orville to obtain practice in controlling and maneuvering a powered machine.

**JULY 30.** Modification of 1904 machine completed. The gas tank and radiator are moved rearward, and blade width of propellers is increased.

**AUGUST 13.** Wilbur flies 1,340 feet in 32 2/5 seconds, breaking previous distance record set at Kitty Hawk.

**SEPTEMBER 1.** First basic Wright French patent No. 342,188 published. The patent was applied for on March 22, 1904, and was granted July 1, 1904.

**SEPTEMBER 7.** Wrights use a catapult launching device, sometimes called the starting derrick, for first time in launching machine.

**SEPTEMBER 15.** Wilbur makes first turn in the air, a half circle.

**SEPTEMBER 20.** Wilbur makes first complete circle in airplane, witnessed by Amos I. Root, editor and publisher of Gleanings in Bee Culture, who had driven nearly 200 miles from Medina, Ohio, to see the flights.

**OCTOBER 15.** Chanute visits Wrights in Dayton and witnesses short flight by Orville. Machine damaged in landing.

**OCTOBER 24.** Lt. Col. John E. Capper, British Army, visits Wright brothers in Dayton on behalf of British government, seeking proposal for sale of their airplane.

**NOVEMBER 1.** After starting down track, Orville wrenches shoulder in attempting to stop when stake holding restraining wire pulls loose.

**NOVEMBER 9.** Wilbur flies five minutes four seconds, distance 2 3/4 miles, making almost four circles of the field, the best and longest flight of the year.

**NOVEMBER 16.** Orville makes flights of 1/2, 1/3, and 1/8 miles and Wilbur a flight of two miles, making 2 1/4 turns of the field.

**DECEMBER 1.** Orville makes flight of about 2 3/4 miles, almost four circles of the field.

## 1905

**JANUARY 1.** Amos I. Root publishes in Gleanings in Bee Culture his account of Wright flight on September 20, 1904, first eyewitness report of powered flight.

The Wright airplane was later described in the January 15 issue of the magazine, and the Wright 1905 flights were reported in the December 1 issue.

**JANUARY 3.** Wilbur sees Robert M. Nevin, Congressman from the Dayton district, in first attempt to interest the government in their plane. Nevin proposed that the Wrights write him a letter, which he would then show to President Taft, who would arrange for the Wrights to meet with War Department officials.

**JANUARY 5–FEBRUARY 24.** Wrights conduct engine and brake tests with four-cylinder engine in preparation for 1905 flights.

**JANUARY 10.** Subsequent to his visit to their home in Dayton in October, the Wrights write Col. John E. Capper for assurance that British government would be interested in an offer of their airplane.

**JANUARY 18.** Following Wilbur's meeting in Dayton on January 3 with Congressman Nevin, Wrights write him asking whether U.S. government would be interested in their airplane.

Nevin referred their letter to the Secretary of War on January 21.

**JANUARY 26.** Nevin replies to Wrights, enclosing letter of January 24 from Maj. Gen. George L. Gillespie, U.S. Board of Ordnance and Fortification, which states that because "It appears from the letter of Messrs. Wilbur and Orville Wright that their machine has not yet been brought to the stage of practical operation" the board is unwilling to contribute funds toward its development.

**MARCH 1.** Wrights offer to furnish British War Office a flying machine for scouting purpose, the price contingent of performance of the machine.

**MAY 2.** Wilbur's tract dealing with misuse of funds of the United Brethren Publishing House, with which his father was deeply concerned, is published and distributed to many delegates to the General Conference of the Church of the United Brethren in Christ, Old Constitution, to be held in Michigan late in May.

The General Conference endorsed the policy of the minority trustees, of whom Bishop Wright was one.

**MAY 13.** In a letter to the Wrights, British War Office states it is requesting military attaché in Washington, Col. Hubert J. Foster, to call on them to witness their machine in flight.

**MAY 23.** Wrights begin setting up 1905 machine and complete it in June.

**MAY 28.** Wilbur reports to Chanute that he has recently returned from a week's trip to Michigan to attend General Conference of his father's church.

**JUNE 23.** Orville makes first flight with 1905 machine, a flight of 9 1/2 seconds.

This is the first of a series of 50 flights carried out during the year and ending October 16, providing practice and further experimentation in improving the lateral stability of the airplane. These flights were witnessed by 17 persons.

**JULY 25.** Carl Dienstbach, American correspondent of Illustrierte Aeronautische Mitteilungen and author of an article about the Wrights in the March 1904 issue of this journal, visits Wright home in Dayton.

Dienstbach subsequently wrote many articles and reports on the Wright flights.

**AUGUST 30.** Christian Conservator publishes editorial by Wilbur entitled "Shall White River [United Brethren Conference] Destroy Herself?" in interests of his father.

**SEPTEMBER 12.** To correct deficient performance of their propellers in flight, Wrights devise and mount on propeller tips "Little Jokers" (small surfaces, resembling an elevator, set at an angle to balance the pressures that were distorting the blades).

**SEPTEMBER 26.** In the first of series of extended flights, Wilbur flies 11 1/8 miles (17,961 meters) in 18 minutes 11 2/5 seconds. Witnessed by his father.

**SEPTEMBER 29.** Orville flies 12 miles (19,570 meters) in 19 minutes 56 seconds.

**SEPTEMBER 30.** Orville makes flight of approximately 10 miles in 17 minutes 15 1/2 seconds.

**OCTOBER 3.** Orville flies 15 miles (24,535 meters) in 26 minutes 11 1/5 seconds.

**OCTOBER 5.** Wilbur makes longest flight of the year: 24 1/5 miles (38,956 meters) in 39 minutes 23 4/5 seconds, more than 29 rounds of the field, at an average speed of 38 miles an hour. This was a longer flight than the total of their 105 flights of 1904.

Dayton Daily News publishes article stating that Wrights were making sensational flights every day.

**OCTOBER 9.** Wrights write to Secretary of War renewing their offer to furnish a practical flying machine for scouting purposes.

In a letter to Capt. Ferdinand Ferber—French artillery officer who had been experimenting with Lilienthal-type glider since 1899 and, as a result of correspondence of Chanute, with Wright-type gliders since 1902—Wrights state they are prepared to furnish a flying machine on contract, to be accepted only after a trial flight of at least 40 kilometers. They also report results of their 1905 flights and experiments.

**OCTOBER 16.** U.S. Board of Ordnance and Fortification, to which October 9 letter was referred, informs Wrights it must see drawings and description of machine in order to determine its practicality.

**OCTOBER 17–18.** Wrights conduct engine tests.

**OCTOBER 27.** In reply to Wright letter of October 19, U.S. Board of Ordnance and Fortification declines to take any action on Wright offer.

**NOVEMBER 4.** In letter to Capt. Ferdinand Feber, Wrights offer to sell a flying machine to the French government for 1,000,000 francs.

**NOVEMBER 8.** Replying to Chanute's letter of November 4 requesting statement as to extent Wrights were aided by work of Samuel P. Langley, who had died on February 27, Wilbur writes: "The knowledge that the head of the most prominent scientific institution of America believed in the possibility of human flight was one of the influences that led us to undertake the preliminary

investigation that preceded our active work. He recommended to us the books which enabled us to form sane ideas at the outset. It was a helping hand at a critical time and we shall always be grateful."

**NOVEMBER 14.** Charles M. Manly, an engineer who had participated in the airplane experiments of Smithsonian Institution Secretary Samuel P. Langley in 1903, in a speech before the Aero Club of New York, reports that the Wright brothers were able to control their machine in all kinds of weather and that within the last two months had made more than 50 rounds of their flying field near Dayton.

Manly's information apparently was based on witnessing Wright flights in Dayton early in October.

**NOVEMBER 17.** Wrights send letters giving details of their 1905 experiments to Carl Dienstbach, New York representative of *Illustrierte Aeronautische Mitteilungen*, Berlin; Patrick Alexander, London, member of the Aeronautical Society of Great Britain; and Georges Besancon, editor of *L'Aerophile*.

**NOVEMBER 22.** Wrights receive letter from Col. Hubert J. Foster, British military attaché in Washington, requesting view of Wright machine in flight.

**NOVEMBER 30.** Wrights' letter of November 17 to Georges Besancon is published in *L'Auto*, a Paris sports journal, creating sensation and leading to numerous investigations as to the authenticity of the flights. Frank S. Lahm, an American businessman residing in Paris, a balloonist and member of the *Aéro-Club de France*, cables his brother-in-law, Henry M. Weaver in Mansfield, Ohio, requesting information on authenticity of reported Wright flights.

The letter was also published in the December issue of *L'Aerophile*.

**DECEMBER 1.** Wright brothers' letter of October 9 to Capt. Ferdinand Ferber, reporting results of 1905 flights and experiments, published in *L'Auto*.

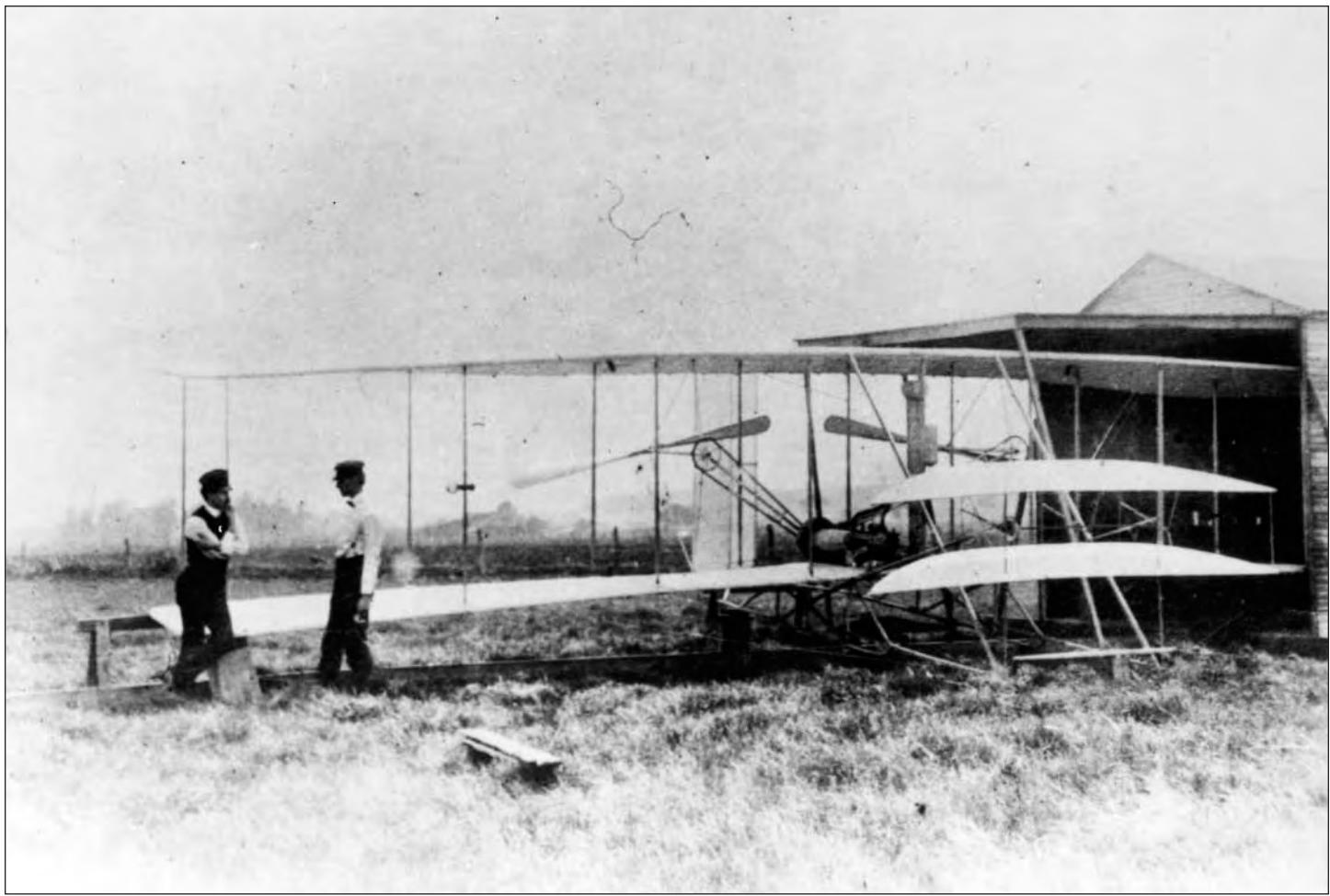
**DECEMBER 3.** Henry M. Weaver visits Wrights in Dayton to verify their reported flights. Weaver cables Lahm, "Claims fully verified, particulars by mail."

Les Sports reports, "All the dailies have published these last days a letter addressed to *L'Aerophile* by the Wright brothers on the subject of their flying machine."

**DECEMBER 6.** Weaver sends letter, as promised, confirming successful flights, basing his reply on interviews with Wright brothers and with eyewitnesses in Dayton, including Charles S. Billman, William Fouts, and farmers David Beard and Amos Stauffer on December 3.

**DECEMBER 12.** Robert Coquelle, writer for *L'Auto*, comes to Dayton to verify Wright claims of powered flight and requests pictures and details of their machine. He is accompanied to Wright home by John F. Johnson, Dayton bicyclist.

The Wrights did not provide him with this information, but Coquelle published a series of articles about them in *L'Auto*, December 23–26 issues, which the Wrights denounced as false and inaccurate.



*Wilbur and Orville Wright with Flyer II at Huffman Prairie.*

**DECEMBER 28.** Arnold Fordyce, author and writer, representing French syndicate that included Capt. Ferdinand Ferber and Henri Letellier, publisher and owner of the French newspaper *Le Journal*, arrives in Dayton to negotiate contract for purchase of Wright airplane.

**DECEMBER 29.** Lahm reads French translation of Weaver's letter of December 6 before a meeting of the Aviation committee of the Aéro-Club de France, resulting in spirited discussion on veracity of the statements made in it.

**DECEMBER 30.** Wrights sign optional contract with Arnold Fordyce, agreeing to deliver to him their first flying machine for 1,000,000 francs, or \$200,000, for the use of the French Army not later than August 1, 1906.

The Wrights were to give a demonstration flight in France within three months to show that the plane could travel 50 kilometers in an hour.

**DECEMBER 31.** Weaver letter of December 6 to Lahm reporting Wrights' 1905 flights published in full in *L'Auto*.

The letter was also published on January 1 in the Paris edition of the New York Herald and in *Les Sports*.

## 1906

**JANUARY.** *L'Aérophile* publishes French Wright patent.

**JANUARY 6.** In response to invitation extended to them in letter of December 22, 1905, Wrights join Aero Club of America.

**JANUARY 7.** New York Times publishes report of Wrights' 1905 experiments based on Root's account in *Gleanings in Bee Culture*, December 1, 1905, issue.

**JANUARY 13–20.** Crankshaft and flywheel of Wright original 1903 engine exhibited at Aero Club of America show held in New York in conjunction with Sixth Annual Automobile Show of the Automobile Club of America.

These parts were not returned by the Aero Club after the show and when a search was made for them some years later they could not be found.

**JANUARY 16.** Wrights begin series of tests with 1905 engine, continuing test at intervals in February, March, April, and July.

**FEBRUARY 5.** Option check for 25,000 francs deposited with Morgan, Harjes & Co., Paris branch of J. P. Morgan & Co., in accordance with contract signed in December for Fordyce.

**FEBRUARY 17–18.** William J. Hammer, consulting electrical engineer, spends two days in Dayton and visits at home of Wrights.

**MARCH 2.** Wright brothers, in report to Aero Club of America, make first public announcement of their successful powered

flights in 1905. Wrights name 13 Dayton residents and four nonresidents as witnesses of these flights.

**MARCH 10.** Aero Club of America adopts congratulatory resolutions and sends them to Wright brothers in recognition of their achievements "in devising, constructing, and operating a successful, man-carrying dynamic flying machine."

**MARCH 12.** Wright brothers' statement of March 2 to Augustus Post, secretary of the Aero Club of America, reporting the successful flights of 1905, made public as printed circulars on Aero Club of America letterhead.

This information reached the press on March 17, with accounts appearing in the newspapers on March 18. The report was later translated by Léonce A. Ferrus and published as *Les Expériences des Frères Wright* (Paris, Berger-Levrault et Cie., 1907).

**MARCH 13.** Edward B. Grimes, journalist, visits Wright home to obtain information for article on Wrights.

This article, subsequently published in the Technical World Magazine, June 1906 issue, is based largely on and incorporates the Wright statement of March 2 to the Aero Club of America.

**MARCH 20-APRIL 5.** French commission, composed of Arnold Fordyce, the head, Commander Herni Bonel, Capt. Henry J. Régnier, Capt. Jules H. F. Fournier, and attorney Walter V. R. Berry, which was sent by the French War Ministry to negotiate changes in the contract signed with Fordyce, visits the Wrights but fails to reach agreement and option lapses.

**MARCH 21.** Wright brothers' report of successful 1905 flights, submitted to Aero Club of America on March 2, is among articles included in cornerstone laid for new club house being built by the Automobile Club of America in New York.

**APRIL 2.** At request of Wrights, Octave Chanute comes to Dayton from Chicago to be present at conference with French military mission negotiating purchase of airplane.

**APRIL 7.** Scientific American publishes results of questionnaire sent to 17 eyewitnesses of the longer 1905 Wright flights, along with text of letter from one of them, Charles Webbert.

**APRIL 14.** Wrights address identical letters to German, Italian, Japanese, and Russian ministers of war, offering to sell airplane.

Scientific American publishes letter from Octave Chanute dated March 31, which confirms report of successful flights by Wright brothers. The letter is in response to editor's letter of March 19 and a telegram dated March 29 to Chanute seeking verification of a statement attributed to him which appeared in the *Illustrierte Aeronautische Mitteilungen*, February issue.

**APRIL 20.** Patrick Y. Alexander, on second visit to Dayton (first was December 24, 1902), is dinner guest at Wright home.

The Wrights suspected that he came in the interests of the British government to ascertain if they had entered into a contract with the French.

**MAY 8.** In response to a communication of February 8, Wrights offer their flying machine to the British War Office.



*Submitted in 1903, the Wright Brothers finally received this patent in 1906 for their airplane that they tested in North Carolina.*

**MAY 16.** Glenn H. Curtiss, in letter to Wrights, informs them of the facilities of the Glenn H. Curtiss Manufacturing Co. in Hammondsport, N.Y., and offers to provide them with a motor for their plane.

**MAY 20.** In continuance of his offer of May 16, Glenn H. Curtiss telephones Wrights from Columbus, Ohio. Wrights do not respond to offer.

**MAY 22.** U.S. Patent Office grants basic Wright patent, No. 821,393, for a flying machine. Patent application filed March 23, 1903.

**JULY 16.** Wright German patent, No. 22051, granted. Patent application filed March 4, 1904.

**JULY 20.** Wrights begin series of tests with new engine that gives more than 30 hp., 50 percent more than used in their 1905 flights, continuing tests at intervals in August, September, October, and November.

**JULY 31.** In response to letter of July 27, Wrights write Lt. Col. Albert E. Gleichen, British military attaché in Washington, offering to furnish to British government a Wright airplane to

train a British operator, and to give manufacturing rights for \$100,000.

**AUGUST 8.** Col. Gleichen visits Wrights in Dayton.

**SEPTEMBER.** Glenn H. Curtiss, with Capt. Thomas Baldwin, U.S. Army balloonist, visits Wrights at their office and workshop in Dayton.

This was the first meeting between Wrights and Curtiss, who was later to be their opponent in prolonged patent suits commencing in 1909. At this time Baldwin and Curtiss were shown photographs of the Wright 1904 and 1905 flights, and the machine and the flights were discussed at considerable length.

**SEPTEMBER 4.** Wrights receive letter from French Minister of War declaring prior negotiations for purchase of airplane at an end.

**SEPTEMBER 5.** Wrights see an airship aloft for the first time, an exhibition flight given at the Dayton Fairgrounds by Capt. Thomas S. Baldwin, U.S. Army.

**NOVEMBER 22.** Wrights announce they will not publicly test their flying machine because this would jeopardize negotiations for sale of their airplane.

**NOVEMBER 29.** Ulysses D. Eddy, New York businessman and former partner in Flint & Co., calls on Wrights at their home in Dayton to verify newspaper reports concerning their invention, which he believed might interest his former firm and prove profitable.

**DECEMBER 1-8.** New Wright four-cylinder vertical engine exhibited at second Annual Exhibition of the Aero Club of America in New York.

In his letter of November 10 to Dr. George A. Spratt, Wilbur stated, "We have spent the last six months in building some new motors of greater power than the old ones and slightly lighter."

**DECEMBER 5.** Patrick Alexander of England, on his third visit to Dayton, is guest of Wrights in Dayton. In the evening Wilbur, Orville, and he leave for New York to attend New York Aero Show, being held December 1-8 in conjunction with the Seventh Annual Show of the Automobile Club of America at Grand Central Palace.

**DECEMBER 7.** Wrights, accompanied by Octave Chanute, visit the New York Aero Show.

John Brisben Walker, editor of Cosmopolitan Magazine, give dinner in honor of Wrights at Century Club in New York, in which Octave Chanute, Augustus Post, and other prominent individuals attend.

**DECEMBER 8.** Wilbur and Orville go to Coatesville, Pa., for a few days to visit with Dr. George Spratt.

**DECEMBER 10.** Wilbur and Orville go to Washington, where they meet Dr. Albert F. Zahm, Dr. Alexander Graham Bell, Prof. Charles F. Marvin, Prof. Willis L. Moore, and several scientists from the Smithsonian Institution.

**DECEMBER 12.** Wrights return to Dayton.

**DECEMBER 15.** The Wright four-cylinder engine shown at Aero Club of America exhibit in New York, December 1-8, is described and illustrated in Scientific American.

**DECEMBER 17.** In response to interest in Wright airplane expressed by Charles R. Flint of Flint & Co. of London, Berlin, and St. Petersburg, commercial bankers and one of the world's largest munitions dealers, Orville goes to New York for first meeting. On return to Dayton on December 19 he reports prospect of a successful deal.

**DECEMBER 18.** Flint & Co. offers Wrights \$500,000 for their rights outside the United States, money to be paid in full upon delivery of one machine after a demonstration flight of 50 kilometers.

**DECEMBER 26-28.** George H. Nolte of Flint & Co. in New York comes to Dayton to consult with Wilbur and Orville regarding foreign sales rights for the Wright airplane.

## 1907

**JANUARY.** L'Aerophile publishes details and photographs of Wright four-cylinder engine exhibited in New York in December, basing information on account published in Scientific American, December 15 issue.

**JANUARY 7.** Wrights are interviewed in Dayton by George K. Turner of McClure's Magazine.

An article on the brothers entitled "The Men Who Learned to Fly," based on this interview, was subsequently published in the February 1908 issue of the magazine. Wilbur strongly condemned it, claiming it included many incorrect statements, as well as alleged direct quotations not a part of original conversation.

**JANUARY 17.** George H. Nolte of Flint & Co. comes to Dayton for second time in pursuance of negotiations under way between Wrights and Flint & Co. to exploit Wright invention.

**JANUARY 20.** Wrights depart for New York to discuss sale of their airplane abroad with Charles R. Flint, returning to Dayton on January 26.

**JANUARY 24.** Wrights see and discuss sales plans with Courtlandt Field Bishop, president of Aero Club of America, and seek information about conditions of airplane competition announced by Mr. Bishop on January 22 which was reported to have a prize of \$200,000.

**FEBRUARY 5.** Wilbur goes to New York, returning to Dayton on February 9 with report of proposition to supply 50 machines to Germany for half million dollars.

**MARCH 1.** Wrights write Barnum & Bailey, Bridgeport, Conn., to ascertain if they would be interested in exhibiting the Wright airplane.

In September 1907 Barnum & Bailey expressed an interest in exhibiting the machine at the London Exposition in 1908, but nothing developed from this proposal.

**MARCH 20-21.** Wrights conduct experiments with hydroplanes and floats on the Miami River at Dayton.

The dam controlling the water on which they were experimenting broke during the night of March 21–22, preventing further experiments on the river at this time.

**APRIL 2.** In a letter, Wrights provide Congressman Herbert Parsons of New York, whom Wilbur apparently had seen on a trip to New York the preceding week, with copies of correspondence between Wrights and Board of Ordnance and Fortification in 1905.

**APRIL 6.** Wrights complete and achieve satisfactory test with a new engine weighing 160 pounds and giving more than 30 hp. Engine tests continued April–June.

**APRIL 23.** In letter to Congressman Parsons, Wrights express willingness to meet with Gen. J. Franklin Bell of U.S. Army.

In prior letter of April 15 to the Wrights, Congressman Parsons, who was endeavoring to interest President Roosevelt in the Wright machine, had enclosed a letter from Gen. Bell addressed to Parsons.

**MAY–JUNE.** Orville works on improved airplane and experiments with new engine.

**MAY 3.** Wilbur and Orville elected honorary members of Wiener Flugtechnischer Verein, Vienna.

**MAY 8.** Herbert N. Casson, author of “At Last We Can Fly; the Story of the Wright Brothers” in the American Magazine, April 1907 issue, visits Wright home in Dayton.

**MAY 16.** In response to telegram dated May 15 from Flint & Co., Wilbur leaves Dayton for New York and sails for Europe aboard R.M.S. Campania on May 18, arriving in London on May 25 and in Paris on May 27 to begin a series of talks with Flint & Co. agents in London, Paris, and Berlin, which it was hoped would lead to the sale of the Wright flying machine.

**MAY 17.** In letter to the U.S. War Department in response to a communication of May 11, Wrights renew offer to supply a flying machine to the government that will carry two men and a fuel supply for a flight of 200 kilometers and state that they are willing to make it a condition of contract that the machine must make a trial before government representatives of not less than 50 kilometers at a speed of not less than 50 kilometers an hour.

**MAY 22.** Aero Club of America publishes *Navigating the Air; a Scientific Statement of Aeronautics Up to the Present Time*, which contains “The Relations of Weight, Speed, and Power of Flyers” by the Wright brothers, giving comparative data for the 1903, 1904, and 1905 airplanes. Appended are letters to the Aero Club of America from four witnesses of flights made by the Wrights at Dayton in 1905.

**MAY 27.** Wilbur arrives in Paris and spends day sightseeing.

**MAY 28.** Wilbur, accompanied by Hart O. Berg and Frank R. Cordley of Flint & Co., has conference with French industrialist Henri Deutsch de la Meurthe in first effort to sell the Wright airplane.

Deutsch de la Meurthe expresses willingness to join in formation of a company or to introduce Wright to French

Minister of War. The Wright proposition provided for a flight of 50 kilometers, with an altitude of up to 300 meters with one man aboard, the price to be a million francs.

**MAY 31.** Wrights reply to May 22 letter of Board of Ordnance and Fortification, offering to deliver a Wright flying machine for \$100,000 and to teach an operator to fly it.

**JUNE 13.** Wilbur visits Aero-Club Park in Saint-Cloud to view balloon contest conducted by Aéro-Club de France.

**JUNE 15.** In response to letter of June 8, Wrights elaborate the conditions set forth in offer of May 31 to the U.S. Board of Ordnance and Fortification.

**JUNE 21.** Orville journeys to Springfield, Ill., to consult Harry A. Toulmin regarding new patent on device for maintaining automatic stability in an airplane.

He made a second trip on June 26.

**JUNE 24.** Wilbur, following discussions with Flint & Co. representative Henry Peartree on June 20–22, submits proposition to French Minister of War providing for a flight of 50 kilometers, rising to an altitude of 300 meters with one man on board, the price of the airplane to be one million francs.

**JULY 2.** French government declines Wilbur’s proposition of June 24.

Orville, in cable from Dayton to Wilbur sent the previous day, also is not agreeable to these terms.

The U.S. War Department declines to enter into a contract with the Wrights.

**JULY 14.** Wilbur, with tickets provided by the French War office, views Bastille Day ceremonies in Paris, including the review of French troops at Longchamps by President Clément Armand Fallières of France, Premier Georges Clemenceau, and Gen. Georges Picquart.

**JULY 17.** At Saint-Cloud, Wilbur is passenger in the balloon La Mouche, built by Maurice Mallet and piloted by Charles Levée and Alan R. Hawley.

James E. Harrington was also a passenger. The descent was made at Charpentrie, 10 miles from Orleans. The trip of nearly 80 miles lasted three hours and 15 minutes.

**JULY 18.** In response to a cabled request on July 13 from Wilbur, who hopes to make a deal with the French, Orville leaves Dayton from New York en route to Paris to join him, sailing on July 20 aboard the Philadelphia and arriving in Paris on July 28.

**JULY 19.** At the request of Isidor Lowe, Wilbur prepares “Comparison of Airships With Flyers” (first published in The Papers of Wilbur and Orville Wright in 1953). He concludes, “Every recognized scientific student of aeronautics in the world favors aeroplanes against airships.”

**JULY 20.** Wright machine crated and shipped from Dayton to France in anticipation of demonstration flight in connection with sale.

The machine remained in storage in Le Havre until the summer of 1908.

**JULY 31.** Wrights submit to the French Minister of War new revised proposition for sale of airplane.

**AUGUST 1.** Orville, Frank R. Cordley, of Flint & Co., and Charles Levée, member of Aéro-Club de France, visit Maurice Mallet's balloon factory in Paris. Meet with Victor Tatin, early French aviation experimenter.

Charles E. Taylor, Wright mechanic, in response to Wilbur's request of July 15, leaves Dayton to join the Wrights, arriving in Paris August 11.

**AUGUST 4.** Wilbur, accompanied by Hart O. Berg, leaves Paris for Berlin to see Isidor Loewe, armament manufacturer, and to commence negotiations for sale of Wright airplane in Germany.

**AUGUST 6.** Wilbur, with Hart O. Berg commences German negotiations for sale of Wright machine, with conference with Isidor Loewe and Capt. Richard von Kehler of the German Army and head of the Motorluftschiff-Studiengesellschaft, Berlin.

**AUGUST 17.** Wilbur returns to Paris.

**AUGUST 24.** All offers to the French Minister of War are withdrawn by the Wrights because of their disappointment with long, drawn-out negotiations.

**SEPTEMBER 15.** Wilbur leaves Paris for Berlin on second visit to Germany to continue negotiations.

**OCTOBER 1.** Wilbur has conference at balloon station at Tegel regarding sale of Wright airplane to German Army with Maj. Hans Gross, who expresses an interest if Wrights can provide a practical machine.

Orville, in London, receives telegram from Wilbur on October 2 requesting him to come to Berlin to participate in negotiations.

Orville arrived in Berlin on October 3.

**OCTOBER 22.** Orville returns to Paris from Berlin to confer with Lt. Frank P. Lahm, then proceeds to London on October 24 to confer with Lt. Col. John E. Capper, and returns to Paris again on November 3.

**OCTOBER 24.** Carl Dienstbach and Capt. Alfred Hildenbrandt, formerly with the German Aeronautics Corps, arrive in Dayton to authenticate reports of flights, interviewing witnesses and Bishop Wright in absence of the Wrights.

In a subsequent article in the German newspaper Lokal-Anzeiger, published November 18, Hildebrandt affirmed the validity of the evidence of the Wright flights.

**OCTOBER 25.** Wilbur returns to Paris from Berlin, with German negotiations unsettled.

**OCTOBER 30.** Replying from London to a letter of October 5, Wrights ask U.S. Board of Ordnance and Fortification if it is interested in a conference and say that one of the brothers is

willing to return to the United States at once to discuss the matter and to give demonstration flights.

**NOVEMBER 2-3.** Orville, having arrived in London from Paris on October 29, spends the weekend with Col. and Mrs. John E. Capper at their home in Farnborough, England.

Col. Capper, of the Royal Aircraft Factory, had called on the Wrights in Dayton in 1904 at the request of the British Government.

**NOVEMBER 3.** Wrights sign agreement with Flint & Co. and Hart O. Berg providing that they act as sole agents for the Wrights abroad and negotiate agreements with governments for purchase or use of Wright airplane and for the formation of companies to take over ownership or exploitation of Wright inventions.

Flint & Co. accepted this agreement on December 2.

**NOVEMBER 11.** Wilbur, accompanied by Wright mechanic Charles E. Taylor, leaves Paris for London, spends several days there, and sails for the United States from Liverpool aboard R.M.S. Baltic on November 14, arriving in New York on November 22.

**NOVEMBER 14.** Orville, with Hart O. Berg, visits the automobile show in Paris and there meets Marquis Albert de Dion, Ferdinand Charron, and Capt. Ferdinand Ferber, all members of the Aéro-Club de France.

Orville again visits the automobile show on November 27.

**NOVEMBER 18.** Orville, with Berg and the English writer Walter Savage Landor, witnesses French flyer Henri Farman compete for a Deutsch-Archdeacon prize of 50,000 francs at Issy-les-Moulineaux, near Paris.

**NOVEMBER 25.** Wilbur, in Washington, following his return from Europe, meets with Gen. James Allen, chief of the Signal Corps, and Gen. William Crozier and Maj. Lawson M. Fuller of the Ordnance Department, and provides them with information on the performance of the airplane the Wrights are willing to guarantee for \$25,000.

**DECEMBER 3.** Wilbur goes to Washington to confer with Board of Ordnance and Fortification on December 5 in continuance of discussions of November 25 and returns to Dayton on December 6.

**DECEMBER 4.** Orville departs for the United States aboard the Oceanic, arriving home in Dayton on December 13.

**DECEMBER 5.** Wilbur appears before the Board of Ordnance and Fortification in a meeting in Washington and confers with Gen. James Allen. He offers U.S. government an airplane capable of carrying two people for \$25,000.

**DECEMBER 9.** Wilbur writes Octave Chanute, "Our plan is to spend the winter building a half dozen new machines for the spring trade. We do not fear any serious competition until after we show our machine."

**DECEMBER 18.** In letter to Gen. James Allen, Wrights offer suggestions on proposed specifications to be issued for proposed bids on flying machines.

**DECEMBER 23.** U.S. Signal Corps advertises for bids on military heavier-than-air flying machine to be submitted to Board of Ordnance and Fortification by February 1.

The specifications were published in full in Scientific American Supplement, December 28 issue.

## 1908

**JANUARY 18.** Wrights supply information on their airplane and flights to Lt. Thomas E. Selfridge, secretary of the Aerial Experiment Association, Hammondsport, N.Y., who had requested technical data in a letter of January 15.

**JANUARY 20.** Orville goes to Springfield to consult Harry A. Toulmin on Wright patents.

**JANUARY 22.** Orville goes to Canton, Ohio, to witness balloon ascension by Lt. Frank P. Lahm, returning on January 23.

**JANUARY 27.** French Wright patents Nos. 384,124 and 384,125 applied for November 18, 1907 issued.

Wrights submit bid to U.S. Signal Corps to furnish a heavier-than-air flying machine designed to weigh between 1,100 and 1,250 lbs. With two men on board, and for a speed of 40 miles an hour, to be delivered in 200 days.

**FEBRUARY 8.** Wrights' bid to furnish a flying machine to the U.S. War Department for \$25,000 is accepted.

**FEBRUARY 10.** Wrights apply for patent on device for maintaining automatic stability (issued October 14, 1913—their patent No. 1,075,533).

First formal Army airplane contract signed by U.S. Signal Corps with Wright brothers, with Capt. Charles S. Wallace signing on behalf of Signal Corps and Orville for the brothers. Wrights agree to deliver for \$25,000 by August 28, 1908, a heavier-than-air flying machine meeting U.S. Signal Corps Specification No. 486, dated December 23, 1907.

**FEBRUARY 17.** Wrights apply for two additional flying machine patents, their patent No. 987,662 granted on March 21, 1911, and their patent No. 1,122,348 granted on December 29, 1914.

**FEBRUARY 29.** Scientific American publishes article by Wilbur entitled "Flying as a Sport—Its Possibilities," which was contributed to a "Sportsman's Number" of the magazine.

**MARCH.** Orville works on new four-cylinder vertical motor.

**MARCH 15.** Wilbur goes to New York, returning to Dayton on March 20, to discuss with Flint & Co. the terms of a new French contract for the formation of French Wright company. This provided for a syndicate to be formed by Lazare Weiller, with other French capitalists, to buy the Wrights French patents and the rights to manufacture, sell, or license Wright airplanes in France.

L'Auto reports that the Wright brothers have signed a contract with French firm Bariquand & Marre for seven 40-hp engines.

**MARCH 23.** Lazare Weiller agrees to contract with Wrights for formation of company in France.

The conditions specified included an agreement to execute twice a minimum flight of 50 kilometers an hour. The second flight was to be made, at the earliest, three days after the first. Orville and Wilbur were to receive 2,500 shares, each, of the founders shares. Orville disposed of these shares in September 1920 for \$1,800.

**APRIL 4.** Wright 1904 airplane shipped to Kitty Hawk to be used by Wrights for practice flying and in renewing their pilot skills, as they had done no flying since 1905.

**APRIL 6.** Wilbur leaves for Kitty Hawk, arriving there April 9.

**APRIL 10.** Public announcement of Wright brothers' contract with Lazare Weiller is made in L'Auto.

**APRIL 15.** Charles W. Furnas, Wright mechanic, arrives at Kitty Hawk to assist Wrights in their experiments.

**APRIL 21.** Orville leaves for Kitty Hawk, arriving there April 25. Wright machine arrives the same day.

**APRIL 25.** Wilbur, with assistance of Charles Furnas, completes new building, begun April 20, to be used for living quarters during 1908 experiments.

**APRIL 27.** Wrights unpack and begin assembly of their airplane.

**MAY 1.** French aviation magazine L'Aérophile publishes description of Wright airplane, based on drawings filed with Wright patent Nos. 384,124 and 384,125 in French Patent Office.

Norfolk Virginian-Pilot carries exaggerated story concerning the Wright brothers, reporting they had flown 10 miles to sea and returned and had done a lot of maneuvering over the ground. New York Herald telegraphs the Weather Bureau at Manteo, N.C., for information.

**MAY 5.** Wrights visited by D. Bruce Salley, free lance reporter from Norfolk, Virginia, who had arrived at Manteo on May 4 and had been instructed to report on sensational flights reportedly carried out several days ago.

**MAY 6.** Wrights fly for first time in 1908. Wilbur flying a distance of 1,008 feet at average speed of 41 miles, the first of a series of 22 flights carried out May 6–14 with their 1905 machine modified so that the operator and a passenger could sit erect.

**MAY 7.** D. Bruce Salley's dispatch of May 6 from Norfolk, reporting that the Wright brothers had flown almost 1,000 feet at an altitude of 60 feet, published in New York Herald.

**MAY 14.** Wrights carry a passenger for the first time, Wilbur making a flight of about 600 meters in 28 3/5 seconds, with Charles W. Furnas of Dayton aboard, and Orville another with Furnas, making a complete circle and covering a distance of 2 1/2 miles (4,120 meters) in four minutes 2 2/5 seconds.

This and other flights in May were witnessed from a distance by a group of newspaper correspondents, including Byron R. Newton, of the New York Herald, William Hoster, of the New York American, P. H. McGowan, of the London Daily Mail, Arthur Ruhl, writer, and James H. Hare, photographer, for



*The Wright Flyer demonstrations at Fort Myer, Virginia, on September 3, 1908.*

Collier's Weekly, and by the men of the Kill Devil Hill Life Saving Station and others in the area.

**MAY 17.** Wilbur leaves Kitty Hawk, en route to Europe, without returning to Dayton, arriving in New York on May 19 and consulting with Flint & Co. on May 20.

**MAY 20.** Wilbur writes to Orville, declaring that "We need to have our true story told in an authentic way at once," which subsequently leads to Orville's article furnished to the Century Magazine and published in September.

**MAY 21.** Wilbur sails from New York for Paris aboard steamship La Touraine, arriving May 29 to demonstrate capabilities of Wright machine in Europe.

**MAY 23.** Orville arrives in Dayton from Kitty Hawk, stopping in Washington, D.C., en route to inspect grounds at Ft. Myer.

Scientific American reports on Wright flights at Kitty Hawk, May 6–14, and states that "In view of these semi-public demonstrations, there can be no further doubt of the claims made by the brothers as to their ability to fly."

**MAY 29.** New York Herald publishes for first time detailed drawings and description of Wright airplane from drawings and description filed with French Patent Office when patent application was made.

**MAY 30.** Arthur Ruhl's account of May flights of Wright brothers at Kitty Hawk, illustrated with photographs by James Hare, published in Collier's Weekly.

**JUNE 3.** Orville releases account of Wright May 1908 flights at Kitty Hawk to Aero Club of America and four technical journals.

This account as published in Aeronautics (New York), June issue; Scientific American, June 13 issue; L'Aérophile, June 15 issue; and Illustrerte Aeronautische Mitteilungen, July 1 issue.

**JUNE 5.** Wright engine and airplane shipped from Kitty Hawk arrives back in Dayton.

**JUNE 6–AUGUST 5.** Wright engine tested and airplane worked on by Orville preparatory to shipping it to Washington for Army trials.

**JUNE 8.** Wilbur and Hart O. Berg, seeking a suitable flying ground, go to Le Mans, located about 125 miles southwest of Paris, at invitation of Leon Bollee, factory owner who offers Wilbur use of facilities to set up his machine.

**JUNE 12.** Berg informs Wilbur that the Hunaudières Race Course at Le Mans has been rented from Count Roger de Nicolay, president of the Jockey Club and principal owner of the race course, at a monthly rental and a share of the gate receipts if exhibition flights are staged there.

**JUNE 15.** Orville travels to Springfield to discuss Wright patents with Harry A. Toulmin.

**JUNE 16.** Wilbur arrives at Le Mans to commence trial flights. Cases containing Wright airplane arrive, are taken to Leon Bollée's shop and opened, disclosing considerable damage occurring en route due to improper packing.

**JUNE 20–AUGUST 8.** Wilbur assembles Wright airplane and tests engine preparatory to first flight at Le Mans.

**JUNE 22.** Orville completes and sends article setting forth their aeronautical achievements to date to Century Magazine, for which he is paid \$500.

**JULY–AUGUST.** Orville, assisted by Charles E. Taylor, works on construction of parts for five Wright machines for delivery to Wilbur in France.

**JULY 3.** Wilbur spends day in Paris with Frank S. Lahm, discussing past and future of flying, and returns to Le Mans in the evening.

**JULY 4.** Wilbur burned on left arm by escaping steam from broken water connection in engine while testing his flying machine.

**JULY 15.** Wrights apply for patent on mechanism for flexing the rudder of a flying machine, which was granted on January 5, 1909 (their patent No. 908,929).

**JULY 20.** Orville writes Glenn H. Curtiss that ailerons used in Curtiss June Bug are an infringement on Wright warping patents.

**JULY 26.** Wilbur, accompanied by René Pellier and Léon Carré, makes a second balloon ascension in a spherical balloon, Au Petit Bonheur, recently purchased and piloted by Léon Bollée at Le Mans.

**JULY 29.** Wilbur and Orville elected honorary members of Aeronautic Society, New York.

**AUGUST 8.** Wilbur finishes assembling machine and makes a flight of one minute 45 seconds at an estimated speed of 55 kilometers per hour using stick control for first time, at the Hunaudières Race Course.

Wilbur reserves rights to photographs of his first flight to Century Magazine. Other photographers are not permitted to take close-up photographs. Flight is witnessed by large crowd, majority from Le Mans and nearby countryside, as well as by many members of Aéro-Club de France and a number of newspaper representatives from Paris.

This was the first flight made by the Wrights in Europe and the first of nine made at the Hunaudières Race Course, August 8, 10–13.

**AUGUST 13.** Wilbur makes last flights at Hunaudières Race Course, flying for eight minutes 13 2/5 seconds and for two minutes 20 seconds. A wing of his machine is damaged on landing on this last flight, prompting his decision to move to a larger field.

**AUGUST 16.** Wilbur, accompanied by Hart O. Berg, is guest at luncheon in his honor given by Baron Paul d'Estournelles de Constant, senator for the Département de la Sarthe, at Chateau Clermont, near La Fléche.

Wright engine and airplane parts packed and shipped to Fort Myer, Va., for forthcoming Signal Corps trials by Orville.

**AUGUST 18.** Wilbur completes repairs to damaged machine and transports it to Camp d'Auvours.

**AUGUST 19.** Orville leaves for Washington, D.C. and arrives there the next day with the Wright 1908 machine to be used in flights in fulfillment of Wright Army contract.

**AUGUST 21.** Wilbur resumes flying at a new location, Camp d'Auvours, seven miles east of Le Mans, making flights of one minute 49 1/5 seconds and two minutes 14 seconds.

This was the first of an extensive series of flights at Camp d'Auvours, lasting through December 31 in which Wilbur continually increased the length and altitude of his flights, carried passengers, trained pilots, established new flight records, and brought numerous prizes and honors to the Wrights.

**AUGUST 22.** Orville attends banquet at National Press Club in Washington at which the balloonist Thomas S. Baldwin was guest of honor.

**AUGUST 22–SEPTEMBER 2.** Wright airplane at Fort Myer is unpacked, assembled, and engine tested. Starting track, with wooden tower for hoisting the catapult weight, prepared and wooden shelter for machine constructed. Tent set up which serves as office for contractor.

**AUGUST 23.** Wilbur honored at banquet given by Agricultural Society in La Fléche. He is presented with the Universal Peace Society bronze medal and accepts a similar one in behalf of Orville.

At invitation of Dr. Albert F. Zahm, Orville moves from St. James Hotel in Washington to Cosmos Club.

**AUGUST 25.** Wilbur guest of honor at banquet given by Lazare Weiller at Hotel du Dauphin in Le Mans. Other guests include M. d'Auriac Prefect of the Département de la Sarthe, Gen. Georges A. Bazaine–Hayter, Baron Paul d'Estournelles de Constant, Léon Bollée, René Pellier, vice president of the Aéro-Club de la Sarthe, and representatives of the press. Aviators present included Henri Farman, Henry Kapferer, Marcel Kapferer, Paul Zens, and Ernest Zens.

**AUGUST 27.** Wright airplane assembled at Fort Myer and ready for testing.

**AUGUST 29.** Scientific American publishes detailed photographs and description of Wright airplane.

The account was continued in the September 26th issue of the magazine and was based largely on Orville's article in the September issue of the Century Magazine.

**AUGUST 30.** Orville guest at home of David Fairchild, botanist.

**SEPTEMBER.** First popular presentation by the Wrights of the aeronautical achievements to date, entitled "The Wright Brothers' Aeroplane," is published in the Century Magazine. Though it appears under joint authorship, the article was entirely the work of Orville.

**SEPTEMBER 1.** Wilbur sends cablegram from Le Mans to Chicago Daily News denying reports that he planned to fly across English Channel. He states that his primary purpose is to meet the conditions stipulated by the French company seeking to buy the Wright airplane. He says further that the huge crowds witnessing flights have prevented a record-breaking distance record up to this time.

**SEPTEMBER 3.** In preparation for forthcoming trials in fulfilling Army contract, Orville makes first flight at Fort Myer, Va., near Washington, D.C., a flight of one minute 11 seconds, in which he circled the field 1 1/2 times.

This was the first of a series of 14 flights, many of which established records, extending through September 17.

**SEPTEMBER 5.** Wilbur is guest at dinner at Chateau-de-Loir. Attending the dinner are Mr. and Mrs. Hart O. Berg, Paul Tissandier, Paul Zens, and Ernest Zens.

**SEPTEMBER 6.** Wilbur is visited by French balloonists Paul and Ernest Zens and Paul Tissandier who travel in small balloon from gas works at Le Mans, descend on artillery grounds, and land 20 yards from Wilbur's airplane shed.

**SEPTEMBER 9.** Orville establishes three new records by making a flight of 57 minutes 31 seconds in which he circled the field 57 times, a flight of one hour two minutes 15 seconds in which he circled the field 55 times, and a flight of six minutes 24 seconds with Lt. Frank P. Lahm as passenger. The last flight of the day lasted until after dusk and was probably the first night airplane flight. Flights witnessed by Secretary of War Luke E. Wright, Secretary of Commerce and Labor Oscar S. Straus, and other high-ranking government officials.

**SEPTEMBER 10.** Orville flies one hour five minutes 52 seconds and rises to an estimated altitude of 200 feet, breaking the record of the previous day.

Dayton Mayor Edward E. Burkhart sends Orville letter of congratulation from city of Dayton on his record-breaking flight at Fort Myer on September 9.

**SEPTEMBER 11.** Orville flies one hour 10 minutes 24 seconds, another duration record, circling the field 57 1/2 times and describing two figure eights, the first seen at Fort Myer.

**SEPTEMBER 12.** Orville establishes two new records, flying for nine minutes 6 1/3 seconds with Maj. George O. Squier, a new passenger record, and flying one hour 14 minutes 20 seconds, circling the field 71 times and attaining a maximum altitude of about 300 feet, a new duration record and the longest 1908 flight made by Orville.

**SEPTEMBER 14.** Crowd estimated at 5,000, largest to date, comes to Camp d'Auvours to witness flights by Wilbur, but engine trouble prevents any flying. Visitors include Count A. D. Economos, Louis Blériot, Frank S. Lahm, Auguste Nicolleau, Capt. Gérard Binné, Paul Tissandier, Paul Zens, and Ernest Zens.

**SEPTEMBER 16.** Wilbur flies 39 minutes 18 2/5 seconds at Camp d'Auvours, establishing new French record.

In a flight lasting two minutes 28 1/5 seconds Wilbur carries his first European passenger, Ernst Zens, French Balloonist.

**SEPTEMBER 17.** Orville severely injured and Lt. Thomas E. Selfridge killed at Fort Myer, Va., in first airplane fatality when Wright airplane crashes to earth from a height of about 75 feet after propeller blade breaks and machine goes out of control. This terminates the Wright Army trials for the year.

**SEPTEMBER 18.** Katharine Wright takes leave from teaching assignment and arrives in Washington from Dayton. Accompanied by Charles R. Flint, the Wright brothers' financial agent, she visits Orville at the Fort Myer hospital.

On learning of Orville's accident at Fort Myer, Wilbur postpones preparations for an attempt to win the Michelin and Aéro-Club de France prizes.

**SEPTEMBER 21.** Wilbur flies one hour 31 minutes 25 4/5 seconds covering a distance of 66.6 kilometers, establishing a new world record, in the presence of Henry White, American Ambassador to France.

Katharine represents her brother Orville at burial of Lt. Thomas E. Selfridge in Arlington Cemetery.

**SEPTEMBER 24.** Wilbur honored at reception by Aéro-Club de la Sarthe for establishing new world flying record on September 21. Léon Bollée presides. Baron Paul d'Estournelles de Constant, Hart O. Berg, president of Conseil Générale le Chevalier, and Prefect of the Département de la Sarthe d'Auriac speak in praise of Wilbur.

When asked to say a few words, Wilbur responded with the often quoted remark: "I know of only one bird, the parrot, that talks, and he can't fly very high."

**SEPTEMBER 25.** Spectators witnessing flights by Wilbur include Léon Delagrange, René Quinton, Ernest Archdeacon, Lazare Weiller, Count A. D. Economos, Frank Butler, Mr. and Mrs. Omer Decugnis, Baron Paul d'Estournelles de Constant, Paul Tissandier, Count and Viscount Costa de Beauregarde, and Ernest Zens.

**SEPTEMBER 28.** Wilbur makes flight of one hour seven minutes 24 4/5 seconds, completing a distance of 48 kilometers 120 meters and attaining a maximum altitude of 10 meters, for which he was awarded on September 30 the prize of 5,000 francs offered by the Aviation Commission of the Aéro-Club de France.

**OCTOBER 1.** Aéro-Club de France awards Wrights gold medal for their September flights in France and America.

**OCTOBER 7.** Wilbur makes six flights and on one of them carries his first woman passenger, Mrs. Hart O. Berg, the first real flight made anywhere in the world by a woman.

**OCTOBER 8.** Wilbur makes a series of seven flights, several in the presence of Dowager Queen Margherita of Italy. In the first flight, lasting four minutes 22 seconds, he carries as passenger Griffith Brewer, the first Englishman to fly. The Queen compliments Wilbur on his flying skill.

**OCTOBER 9.** Wilbur is guest at chateau of Count Roger de Nicolay, president of the Jockey Club.

**OCTOBER 10.** Wilbur flies with Prof. Paul Painlevé, member of the French Academy of Sciences and distinguished mathematician, as passenger, a flight of one hour nine minutes 45 2/5 seconds for a distance of 55 kilometers at an altitude of 10 meters, establishing a new world record for duration and distance for two persons. This flight was also officially recognized as fulfilling the flight performance conditions of the Wrights' contract with the Lazare Weiller Syndicate.

Wilbur elected president of Ten Dayton Boys Club at annual meeting of the club.

**OCTOBER 13.** Wilbur acknowledges congratulations received from Crown Prince Friedrich Wilhelm of Germany of successful flights.

**OCTOBER 16.** French Académie des Sports awards Wright brothers gold medal with inscription "To the conquerors of the air, M. M. Wilbur and Orville Wright, the first to fly with an apparatus heavier-than-air driven by a motor."

**OCTOBER 24.** Wilbur flies three minutes two seconds with Baron Oskar von Lancken-Wakenitz, German chargé d'affaires in Paris, as passenger, the first German to fly in an airplane.

Orville is visited in hospital at Fort Myer by Lord Alfred C. W. H. Northcliffe and Gen. Nelson A. Miles.

**OCTOBER 27.** Aero Club of United Kingdom awards the Club's gold medal to Wilbur and Orville "for their pioneer work, 1908" and unanimously elects them honorary members.

**OCTOBER 28.** In accordance with the terms of the Wright contract with the Lazare Weiller Syndicate, Wilbur begins a series of training flights extending through March 20, flying for 12 minutes with Count Charles de Lambert as a passenger, his first lesson with his first French pupil.

**NOVEMBER 1.** Orville and Katharine arrive in Dayton following his discharge from hospital in Fort Myer.

Orville never fully recovered from his injury and suffered irritation of the sciatic nerve when experiencing vibration in airplanes, railroads, boats, or automobiles.

**NOVEMBER 2.** Wilbur and Orville elected honorary members of the Aero Club of America at its annual meeting. The Aero Club also votes to give the Wrights gold medals (designed by Victor D. Brenner), which were presented to them at a White House ceremony, June 10, 1909.

**NOVEMBER 5.** Aéro-Club de France honors Wrights with banquet at Automobile-Club de France, presided over by French Minister of Public Works, Louis Barthou, at which Wilbur receives the Aéro-Club de France gold medal, the Académie des Sports gold medal, and the Aéro-Club de France Aviation Commission prize of 5,000 francs.

Wilbur is guest at luncheon of the French society Autor du Monde, attended by distinguished editors, authors, scientists, and statesmen. These included Louis Liard, vice rector of the Academy of Paris; Henri Bergson, the philosopher; Auguste Rodin, the sculptor; Paul Painlevé, the mathematician; Charles

Wagner, author of "The Simple Life"; and Louis Lepine, Paris chief of police.

In the afternoon Wilbur attends French Senate meeting, where an appropriation for encouragement of aviation was under discussion. On adjournment of the Senate, Baron Paul d'Estournelles de Constant gives a reception in his honor and introduces him to the president of the Senate, Antonin Dubost, and many of the senators. Louis Tillaye, questor of the Senate, delivers short speech of welcome.

**NOVEMBER 9.** Council of Aeronautical Society of Great Britain votes that "the Gold Medal of the Aeronautical Society of Great Britain should be presented to Messrs. Wilbur and Orville Wright, in recognition of their distinguished services to Aeronautical Science." Notification of the award is made on November 21.

**NOVEMBER 10.** Wilbur flies for 15 minutes with Capt. Paul N. Lucas-Girardville as passenger, the first lesson for his second French pupil.

**NOVEMBER 11.** Honorary membership conferred on Wilbur and Orville by Columbia University Aero Club.

**NOVEMBER 13.** Wilbur attains an altitude of 90 meters, winning the Aéro-Club de la Sarthe "Prix de la Hauteur" of 1,000 francs.

**NOVEMBER 17.** Society for the Encouragement of Peace presents gold medal to Wilbur.

**NOVEMBER 18.** Wilbur attains an altitude of 90 meters and wins the "Prix de la Hauteur" of the Aéro-Club de France, 2,500 francs.

**NOVEMBER 20.** Wilbur honored at dinner given by Henri Deutsh de la Meurthe and Aéro-Club de France at the Automobile-Club de France headquarters in Paris. Glowing tributes to the Wrights are paid by Marquis Albert de Dion, Count Henri de la Vaulx, Baron Paul d'Estournelles de Constant, and other guests.

**NOVEMBER 21.** Wilbur and Orville informed of election as honorary members of the Aeronautical Society of Great Britain and of the award to them of the society's gold medal voted on November 9.

**NOVEMBER 30.** La Compagnie Générale de Navigation Aérienne, French Wright company, organized.

**DECEMBER 1.** Aero Club of the United Kingdom gold medal awarded the Wright brothers "for their pioneer work."

**DECEMBER 5.** Wilbur is honored guest at dinner given by Ligue Nationale Aérienne in Paris.

**DECEMBER 18.** Wilbur establishes two new world records, a flight of one hour 54 minutes 2/5 seconds covering a distance of 99.8 kilometers, a new official world duration and distance record, and attains an altitude of 115 meters, a new record for which he received the 100 meter "Prix de la Hauteur" offered by the Aéro-Club de la Sarthe.

**DECEMBER 25.** Cercle des Arts & Sports at Le Mans honors Wilbur at dinner.

Wright airplane is one of chief attractions at Aeronautical Salon in Grand Palace in Paris, which is opened by President Clément A. Fallières of France.

**DECEMBER 28.** Wilbur submits entry fee to enter competition for Coupe Michelin, stating that he will undertake a competitive flight on December 31.

**DECEMBER 31.** Wilbur wins Michelin Cup for 1908 and prize of 20,000 francs with a flight covering 123 kilometers 200 meters (real distance being nearly 150 kilometers) in a time of two hours 18 minutes 33 3/5 seconds. He extends this same flight to establish a new official world duration and distance record in a time of two hours 20 minutes 23 1/5 seconds, covering 124 kilometers 700 meters. This flight also wins the Albert Triaca prize of 500 francs offered for achieving the longest flight in the year 1908.

Following Wilbur's record-breaking flight on this day, Wilbur and Minister of Public Works, Louis Barthou are honored at reception given by the Aéro-Club de la Sarthe in Le Mans. Tributes to Wilbur paid by Léon Bollée and Louis Barthou.

## 1909

**JANUARY.** In Country Life Orville predicts commercial future for the airplane.

**JANUARY 2.** Wilbur sends Wright airplane to French resort town of Pau in the south of France at the edge of the Pyrenees.

Pau had been selected in December on the recommendation of his student flyer Paul Tissandier as a new flying site because of a warmer climate.

**JANUARY 5.** Orville and sister Katharine sail for France on Kaiser Wilhelm der Grosse to join Wilbur in Paris, arriving in Plymouth January 11 and in Paris January 12, where they are met by Wilbur, Mr. and Mrs. Hart O. Berg, a number of journalists, and members of Aéro-Club de France.

Wilbur is honored at luncheon at Hotel du Dauphine in Le Mans, which is attended by Léon Bollée, president of the Aéro-Club de la Sarthe, and fellow members of the Aéro-Club.

Wrights granted patent No. 908,929, originally applied for July 15, 1908, for a mechanism for flexing plane rudder.

**JANUARY 7.** Orville issued Aéro-Club de France pilot's license No. 14, Wilbur No. 15.

**JANUARY 12.** At a luncheon at the Automobile-Club de France in Paris, André Michelin presents Wilbur with Michelin award of 20,000 francs for record-breaking flight on December 31.

**JANUARY 14.** Wilbur arrives at Pau, and Orville and Katharine come from Paris to join him on January 16.

**JANUARY 16.** Orville and Katharine, en route to Pau to join Wilbur, escape injury when their train collides with another coming from Pau and is badly wrecked.

**JANUARY 18.** Les Premier Hommes-Oiseaux: Wilber et Orville Wright, first book to deal with the work of the Wrights, by Francois Peyrey, writer for L'Auto, is published.

**JANUARY 21.** Wilbur and assistants commence unpacking and assembling Wright airplane which, together with the starting rail and derrick, had been shipped from Le Mans on January 2.

City of Pau officially welcomes Wrights and holds dinner and reception in their honor at the Palais d'Hiver. Prominent municipal and military personnel and officials of aeronautical societies attend.

**JANUARY 24.** In letter to Dayton Daily News Wilbur states report published on January 8 that he had been named correspondent in divorce suit brought by a Lieutenant Gougarde is entirely without foundation.

The news service which sent the item, after an investigation, discharged its correspondent, and wrote a letter to Wilbur making full apology.

**JANUARY 25.** Representative J. Eugene Harding, of Ohio, introduces H.J. Res. 246, authorizing Secretary of War to award gold medals to Orville Wright and Wilbur Wright.

A similar bill, S.J. Res. 119, is introduced on same day by Senator Joseph B. Foraker, of Ohio.

**JANUARY 27.** Wilbur and Orville accept honorary membership voted by Österreichischer Flugtechnischer Verein, Vienna.

**JANUARY 29.** Wrights dine with Alfred de Lassence, Mayor of Pau, attend moving picture showing at Theatre de Variétés that includes views of some of Wilbur's flights at Le Mans.

**JANUARY 31.** Russian Wright patent No. 23488 issued.

**FEBRUARY.** In London Magazine Wilbur discusses the London Daily Mail prize of \$10,000 to be awarded to first flyer to complete journey from London to Manchester within a period of 24 hours and with only two stops en route.

**FEBRUARY 3.** Wilbur makes flight of five minutes 57 seconds, reaching an altitude of 35 meters, and another of five minutes 4 3/4 seconds, the first of a series of flights at Pau.

These flights, extending through March 20, were primarily training flights with his three French student pilots, Count Charles de Lambert, Paul Tissandier, and Captain Paul N. Lucas-Girardville.

**FEBRUARY 7.** Wilbur, Orville, and Katharine lunch with Lord Alfred Northcliffe, owner of the London Daily Mail, who had recently arrived in Le Mans.

**FEBRUARY 9.** Wilbur flies at Pau for 19 minutes in the presence of Louis Blériot, French aviator.

**FEBRUARY 10.** Board of Regents of Smithsonian Institution recommends that the newly established Langley Medal be awarded to Wilbur and Orville Wright "for advancing the science of aerodynamics in its application to aviation by their successful investigations and demonstration of the practicability of mechanical flight by man."

Lord Arthur J. Balfour, former Prime Minister of England, and Lord and Lady Frederick G. Wolverton visit Pau to view flights by Wilbur, but snow and bad weather prevent flights.

Wilbur has lengthy visit with Lord Balfour and explains mechanics of plane to him.

**FEBRUARY 11.** Verein deutscher Flugtechniker, Berlin, confers its diploma of honor on Wrights "in acknowledgement of . . . pioneer services in the advancement of the technics of flight."

Lord Northcliffe and Lord Balfour witness 20-minute flight by Wilbur. Lord Balfour joins in pulling rope used to raise weights on the launching derrick.

**FEBRUARY 15.** Katharine is passenger for first time in flight with Wilbur lasting seven minutes and four seconds.

**FEBRUARY 16.** Wrights sign contract for demonstration flights in Germany with August Scherl, owner of the Lokal-Anzeiger, a leading newspaper in Berlin.

**FEBRUARY 20.** King Alfonso XIII of Spain arrives in Pau, goes to the flying field, and is introduced to the Wrights. Two early morning flights by Wilbur are made in his presence. Wilbur explains plane operation in great detail. Wilbur, Orville, Hart O. Berg, and Mayor Alfred de Lassence of Pau, and small party breakfast with King Alfonso.

**FEBRUARY 23.** Ohio State Senator George K. Cetone introduces Senate Bill No. 107 "To provide for a suitable recognition by the State of Ohio for the Wright Bros., inventors of the aeroplane, of Dayton, Ohio."

The bill was enacted by the General Assembly of Ohio on March 12, and a medal presented on June 18.

**FEBRUARY 25.** Orville and Katharine take trip in balloon Icare at Pau with Ernest Zens and the Marquis Edgard de Kergariou, covering distance of 30 kilometers in two hours 10 minutes and landing at Ossun in the Pyrenees.

**FEBRUARY 27.** La Vie au Grand Air publishes interview with Wilbur on his training and instruction methods.

Assembly of second Wright airplane intended for use of Wright pupils near completion at Pau.

**MARCH.** Wrights enter into contract with Short Brothers, Battersea, England, in which Short Brothers agree to construct six Wright machines using Wright plans, cost to be £1,000 each.

**MARCH 4.** Congressional Medal awarded Wright brothers by resolution of Congress, H.J. Res. 246, "in recognition of the great service of Orville and Wilbur Wright, of Ohio, rendered the science of aerial navigation in the invention of the Wright aeroplane, and for their ability, courage, and success in navigating the air."

A gold medal was subsequently designed by Charles E. Barber and George T. Morgan, of the United States Mint, and presented to the brothers on June 18.

British Wright patent No. 24076, applied for November 10, 1908, granted to Wright brothers.

**MARCH 5.** Wrights receive honorary doctor of engineering degree from the University of Munich "in acknowledgement of . . . discoveries, advancements and elucidation of rich consequence in the problems of flight."

**MARCH 17.** Wrights meet King Edward VII, of England when he visits Pau and witnesses two flight by Wilbur, in the second of which Katherine is passenger in flight of 12 minutes 22 seconds.

**MARCH 18.** Orville and Katharine leave Pau for Paris. Wilbur remains.

**MARCH 19–27.** Wright airplane is among those exhibited at the International Aero and Motor-Boat Exhibition (Olympia Air Show) in London.

Wright airplane offered for sale of \$7,000.

**MARCH 20.** Wilbur flies in presence of the French Chamber of Deputies and takes three members for short flights. Wilbur also makes a flight of eight minutes with Capt. P. N. Lucas-Girardville, his last with French student pilots and completing the training part of the Wrights' French contract.

**MARCH 23.** Wright airplane, built at Pau and completed on March 19, shipped to Rome, where Wilbur is to train two Italian pilots. Wilbur departs for Paris to join Orville and Katharine.

**MARCH 24.** Wright student pilots Count Charles de Lambert and Paul Tissandier qualify for Aéro-Club de France licenses by making solo flights of 25 kilometers each.

**MARCH 25.** Dayton City Council recommends appropriation of \$200 to be used for suitable memorial to the Wright brothers.

A Dayton city medal was presented to the brothers on June 18 as "A testimonial from the citizens of their home in recognition of their success in navigating in the air."

Wilbur, Orville, and Katharine visit Le Mans and are received by members of the Aéro-Club de la Sarthe and its president, Léon Bollée.

**MARCH 28.** Wilbur leaves Paris for Rome, arriving on April 1, to prepare for training of the two Italian fliers.

**APRIL 1.** Wilbur, accompanied by Hart O. Berg, Wright European business representative, visits Maj. Mario Moris, head of the Italian military service, with a view to selling Wright airplanes to the Italian government.

Wilbur and Berg meet with Camille Barrére, French Ambassador to Italy.

Orville and Katharine attend monthly meeting of Aéro-Club de France, first time a woman had been invited to an Aéro-Club de France meeting.

**APRIL 2.** Wilbur, accompanied by Berg, is received in special audience by King Victor Emmanuel III of Italy, who was especially interested in the problems of flight.

**APRIL 9.** Assembly of Wright airplane and erection of starting derrick at Centocelle Field is completed.

Katharine and Orville arrive in Rome to join Wilbur.

**APRIL 13.** Pierpont Morgan and party, accompanied by Berg, visit Wrights at Centocelle Field.

**APRIL 15.** Wilbur makes first flight in Italy at Centocelle Field near Rome, a flight of 10 minutes, reaching an altitude of 30 meters, witnessed by a large and enthusiastic crowd.

Between April 15 and 26 Wilbur completed more than 50 flights, many of them with passengers.

**APRIL 16.** Wilbur makes five flights, beginning the training of Lts. Mario Calderara and Umberto Savoia and carrying as a passenger on one flight the former Premier of Italy Sidney Sonnino.

**APRIL 19.** Berg, in military captive balloon in center of flying grounds takes snapshots of Wright plane in flight.

Wilbur explains operation of plane to large groups of teachers and students who had come to Centocelle to view flights.

**APRIL 21.** Wilbur completes seven flights, in one reaching an altitude of 70–80 meters, in others carrying passengers Admiral Giovanni Mirabello, the Duke of Gallese, and the Honorable Emilio Maraini.

Wrights and sister Katharine attend musicale at Campidoglio in Rome on occasion of Rome's founding day.

**APRIL 22.** Wilbur makes nine flights in three of which he carried as passengers Prince Scipione Borghese, Prince Filippo Doria, and Teodor Mayer. Several flights are witnessed by Italian Dowager Queen Margherita.

**APRIL 24.** Wilbur makes five flights, two of them witnessed by King Victor Emmanuel III of Italy. Lloyd C. Griscom, U.S. Ambassador to Italy, accompanied Wilbur as passenger on his last flight. A Universal News Agency cameraman also accompanied Wilbur on one of the flights, taking the first motion pictures from an airplane in flight.

Wilbur, Lt. Mario Calderara, Italian Army officers, and journalists join in luncheon at Fort Casilano.

**APRIL 26.** Students of the School of Engineering, University of Rome, accompanied by the university rector, Dr. Alberto Tonelli, and by Prof. Moise Ascoli, witness and enthusiastically applaud Wilbur's flights.

**APRIL 27.** Wilbur, Orville, and Katharine honored at farewell luncheon given by members of the Rome Aero Club at Excelsior Hotel. Among those present are the Duke of Gallese, president of the club Sidney Sonnino, Prince Filippo Doria, Prince Mario Borghese, and Lt. Mario Calderara.

**APRIL 28.** Katharine, Orville, and Wilbur leave Rome, arriving in Paris the next day.

**MAY.** Wright airplane used in carrying out contract with Lazare Weiller Syndicate presented to Arts et Métiers Museum in Paris.

**MAY 1.** Aéro-Club de la Sarthe in Le Mans give banquet, resided over by the president of the club, Léon Bollée, in honor of Wrights and presents Wilbur with a bronze art object, representing the Muse of Aviation, designed by Louis Carvin. Mayor Alfred de Lassence, on behalf of city of Le Mans, presents him with a gold plaque engraved with the city coat of arms and a second medal on behalf of the citizens.

**MAY 2.** Wrights arrive in London en route to the United States.

**MAY 3.** Wilbur and Orville visit British War Office and confer with War Secretary Richard B. Haldane and Gen. Sir Charles F. Hadden, Master General of Ordnance.

Wrights are guests of Frank Hedges Butler, prominent British balloonist, at luncheon at Carlton hotel, attended by Gen. Sir Charles F. Hadden, Gen. Gerald F. Ellison, Col. Sir Edward Ward, Under Secretary of War, and prominent British aeronauts.

Wrights visit Short Brothers factory at Battersea, where they inspect six machines of their design which are under construction.

Wrights visit Aero Club of the United Kingdom headquarters in Piccadilly.

Aeronautical Society of Great Britain's gold medal, awarded to Wilbur and Orville on November 9, 1908, is presented at ceremonies and banquet, presided over by Edward P. Frost, president of the Aeronautical Society, at the Institution of Civil Engineers.

**MAY 4.** Wrights inspect Aero Club's new flying ground at Sheppen Island.

Wrights honored at banquet given by Aero Club at Ritz Hotel.

**MAY 5.** Wrights depart for New York aboard Kronprinzessin Cecilie.

**MAY 12.** Wrights, having arrived in New York on May 11, honored at luncheon given by Aero Club of America at Lawyer's Club, with A. Holland Forbes, acting president of the club, presiding. Aeronautical enthusiasts and business and professional men praise feats of the brothers in their tour abroad.

**MAY 13.** Thousands in Dayton greet Wilbur, Orville, and Katharine on their return home from European trip. They are taken from the railroad station to their home in a carriage drawn by four white horses. Albert L. Shearer, who had given Wilbur and Orville their first employment in his hardware store in 1882, delivers a welcoming address. John C. Eberhardt presents certificate of friendship entwined in a laurel wreath. Fireworks in the evening end reception.

International Aeroplane Club of Dayton founded, organized to honor Wilbur and Orville. Wilbur and Orville elected honorary members.

Flugmaschine Wright Gesellschaft m. b. H., Berlin, formed, acquiring the Wright German patents for 200,000 marks and rights for manufacture of Wright planes in Germany, as well as sales rights for Sweden, Norway, Denmark, Luxemburg, and Turkey. Orville named as member of the board of directors.

**MAY 31.** Wilbur and Orville go to Detroit to inspect Packard Automobile Company and to see Russell A. Alger, influential stockholder in the company, returning to Dayton on June 2.

**JUNE.** Wrights conduct propeller test in Dayton to determine cause of accident at Fort Myer on September 17, 1908, and to prevent recurrence of similar problems in upcoming flight tests in June and July.

**JUNE 3.** Nord Cincinnati Turn-Verein gives Wilbur and Orville honorary life membership.

**JUNE 6.** Rev. John A. Gray, of Congregational Church of Fairmount, Ind., preaches Sunday evening sermon on "The Wright Brothers; Their Message to the Men of Today."

**JUNE 9.** International Aeroplane Club of Dayton Awards honorary life memberships to Wilbur and Orville "in recognition of valuable contribution to the science of aerial navigation and conspicuous achievements in demonstrating the practicality of the aeroplanes."

Engrossed certificates of membership are presented to the brothers at their home on June 16.

**JUNE 10.** President Taft presents Wilbur and Orville with Aero Club of America gold medals, designed by the artist Victor D. Brenner, in the East Room of the White House in the presence of nearly 1,000 persons, including Aero Club of America officials, scientists, diplomats, military personnel, and high-ranking government officials. In making the presentation President Taft remarked: "You made this discovery by a course that we of America like to feel is distinctly American—by keeping your nose right at the job until you had accomplished what you had determined to do."

Aero Club of Washington honors Wrights at buffet luncheon and reception at the Cosmos Club, attended by distinguished guests and Aero Club of America members.

Wrights are guests of Gen. Clarence Edwards of the Washington Aero Club at dinner at Willard Hotel.

**JUNE 16.** Wright brothers receive honorary bachelor of science degree from Earlham College, Richmond, Ind. Brothers unable to attend exercises.

Wilbur attends meeting of Ten Dayton Boys Club in his capacity as president.

**JUNE 17.** On first day of a two-day celebration staged by Dayton to honor them, the brothers review exhibition parade and drill by the Dayton Fire Department, attend public reception at the Y.M.C.A., are given the key to the city, and witness a fireworks display in which their portraits, 80 feet high and entwined with an American flag, are shown.

**JUNE 18.** On the second day of the celebration, Bishop Wright delivers invocation at ceremony in which gold medals are presented to Wilbur and Orville. Gen. James Allen, Chief Signal Officer of the Army, as the representative of the President, presents the Congressional Medal, Gov. Judson Harmon of Ohio presents the Ohio Medal, and Mayor Edward E. Burkhardt presents the City of Dayton Medal.

Following presentation of medals, the brothers view a parade of floats, including a Wright airplane, depicting development of locomotion in America.

Wright airplane arrives in Washington from Dayton for use in government trials.

**JUNE 19.** Wrights leave for Washington, D.C., and arrive there June 20 to resume the trials that had been interrupted by the Fort Myer accident September 17, 1908.

**JUNE 24.** Assembly of Wright machine at Fort Myer completed.

**JUNE 25–26.** Engine tests conducted by Wrights at Fort Myer.

**JUNE 26.** Senate adjourns to witness flights by Orville, joined by other members of Congress, Army officers, scientists, diplomats, and members of the press. Flights postponed because brothers did not feel they could safely undertake a first flight in a new machine in a 16-mile wind.

Sale of Curtiss airplane by Glenn H. Curtiss, first commercial sale of an airplane in the United States, to the Aeronautic Society of New York for \$7,500, sets in motion the beginning of patent suit by Wright brothers to prevent Curtiss from selling airplanes without a license.

**JUNE 27.** Bishop Wright and son Reuchlin leave Dayton for Washington to view flights by Orville.

They returned July 2, having witnessed flights on June 29, June 30, and July 1.

**JUNE 29.** Orville makes first of series of preliminary flights at Fort Myer, Va., in preparation for Army trials.

**JULY 2.** Orville escapes injury at Fort Myer when ribs of his main plane are broken in passing over a dead tree and the machine falls, breaking the skids.

**JULY 4.** Orville goes back to Dayton to make repairs, returning to Washington on July 7.

**JULY 9.** Mrs. Nicholas Longworth, daughter of former President Roosevelt, comes to Fort Myer to observe Wright flights, is invited by Wrights to view their airplane, and the mechanics of the flying machine are explained to her.

Mrs. Longworth later was a frequent visitor at Fort Myer and served tea from her electric runabout on the Fort Myer parade grounds to prominent spectators.

Secretary of the Navy George L. Meyer and Secretary of War Jacob M. Dickinson inspect the Wright airplane.

**JULY 10–OCTOBER 17.** One of the two Wright machines assembled and used in flights by Wilbur at Pau and Rome exhibited at first Internationale Luftschiffahrts-Ausstellung held at Frankfurt am Main, Germany.

**JULY 20.** Orville flies one hour 20 minutes 45 seconds in unofficial test at Fort Myer.

Katharine Wright goes to Washington to witness flights by Orville.

Wilbur and Orville named to French Legion of Honor.

**JULY 27.** Orville flies with Lt. Frank P. Lahm as passenger, for one hour, 12 minutes, 37 4/5 seconds. This fulfills Army requirement of remaining in air for an hour carrying two persons and establishes record for two-man flight. Flight is witnessed by President Taft, the cabinet, high public officials, and an estimated crowd of 10,000 enthusiastic spectators. Orville is congratulated by President Taft, Maj. Frederick S. Foltz, commandant of the post, Gen. Clarence Edwards, and numerous others at the field.

**JULY 30.** Orville, flying with Lt. Benjamin D. Foulois as passenger, undertakes speed test between Fort Myer, Va., and Shuter's Hill, near Alexandria, over a measured course of five miles across broken country, maintaining speed of 37.735 miles going and 47.431 returning, or an average speed of 42.583

miles per hour, in first cross-country flight, a total distance of about 10 miles.

Gen. James Allen, accompanied by members of the board of award, congratulates Orville on his successful flight.

Maj. Charles G. Treat conveys to Orville the compliments of President Taft, who had witnessed the flight takeoff but was unable to witness the completed flight because of a business meeting.

**JULY 31.** Orville and Katharine leave Washington, arriving in Dayton on August 1. Wilbur remains in Washington to discuss and plan for the training of two additional Signal Corps officers, returning to Dayton on August 2.

**AUGUST 2.** Board of Officers, convened to observe Wright brothers' airplane trials at Fort Myer, Va., meets in office of Gen. James Allen, Chief Signal Officer of Army, and submits report on results of trials. Allen approves recommendation that Army purchase the Wright brothers' airplane.

This completed formal acceptance of the machine by the United States government, the first flying machine purchased and put into service by any government.

**AUGUST 8.** Orville and Katharine Wright leave Dayton for Europe, sailing from New York on August 10 aboard the Kronprinzessin Cecilie and arriving in London August 16 and in Berlin August 19.

Orville was to give demonstration flights and to seek to complete negotiations begun by Wilbur in 1908 for the sale of Wright patents to a German syndicate.

**AUGUST 14.** Wilbur travels to Washington to inspect buildings under construction at College Park to be used by Army pilots undergoing training there.

**AUGUST 16–17.** Wilbur goes to New York to initiate patent suits against Herring-Curtiss Company and Glenn H. Curtiss.

**AUGUST 17.** Orville and Katherine, accompanied by Charles S. Rolls, founder of the British Rolls-Royce automobile company, visit Sheppey Island to inspect Wright airplanes under construction under license by Short Brothers.

**AUGUST 18.** Wright brothers file bill of complaint to enjoin the Herring-Curtiss Company and Glenn H. Curtiss from manufacturing, selling, or using for exhibition purposes the Curtiss airplane.

**AUGUST 19.** Die Bruder Wright, by Capt. Alfred Hildebrandt, published in Berlin.

Wrights file suit against the Aeronautic Society of New York to prevent further exhibition and use of the Curtiss flying machine owned by the society, on the ground that the machine is an infringement of the Wright patents.

**AUGUST 21.** Orville and Katharine are dinner guests of U.S. Ambassador David J. Hill at his home in Berlin.

**AUGUST 23.** James M. Beck, chairman of Aeronautics Committee of the Hudson-Fulton Commission, announces receipt of contract signed by Wilbur providing for series of

flights by him during the Hudson-Fulton celebration in September and October for a fee of \$15,000.

**AUGUST 25.** Wright machine, one of two being assembled by German Wright Company, transferred from military aeronautic headquarters at Tegel to Tempelhof Field.

**AUGUST 29.** Orville meets Kaiser Wilhelm II and is introduced by him to Count Ferdinand Zeppelin, who arrived at Tegeler Schiessplatz shortly after noon on a flight in the dirigible I.Z.6 from Friedrichshafen to Berlin. Count Zeppelin and Orville later dine with the Emperor in his castle.

**AUGUST 30.** Orville makes preliminary flights at Tempelhof Field, a military parade ground near Berlin, preparatory to presenting a number of exhibition flights under the sponsorship of the Berlin Lokal-Anzeiger newspaper and to training pilots for the German Wright Company.

**SEPTEMBER 3.** Ambassador and Mrs. Hill entertain Orville and Katharine with members of American resident colony in Berlin attending.

**SEPTEMBER 4.** Orville makes first public flight in Germany at Tempelhof Field, flying for 19 minutes two seconds for a distance of about 20 kilometers.

**SEPTEMBER 5.** Ambassador and Mrs. Hill honor Orville and Katharine at dinner.

**SEPTEMBER 7.** In response to telegram from Russell A. Alger, stockholder in Packard Automobile Company, Wilbur goes to Detroit.

**SEPTEMBER 9.** Crown Prince Friedrich Wilhelm and Crown Princess Cecilia witness several flights by Orville.

Mrs. Alfred Hildebrandt is a passenger with Orville in a flight of eight minutes 38 seconds, the first woman to fly as a passenger in an airplane in Germany.

Aero Club and Automobile Club of Berlin honor Orville, who was accompanied by Charles R. Flint and Hart O. Berg, with dinner at Imperial Automobile clubhouse in Leipziger Platz.

**SEPTEMBER 9–OCTOBER 13.** Orville instructs Capt. Paul Engelhard in flying.

**SEPTEMBER 10.** Verein deutscher Flugtechniker honors Orville at dinner in Berlin, and Orville and Wilbur are made honorary members of the society.

**SEPTEMBER 15.** Orville takes trip with Count Zeppelin in the Zeppelin dirigible IZ.6 from Frankfurt to Mannheim. Also aboard as passengers are Prince August Wilhelm, Princess Viktoria Luise, and Prince Philip of Coburg. Katharine is passenger aboard airship Parseval.

**SEPTEMBER 17.** In presence of Empress of Germany, Prince Adalbert, Prince August Wilhelm, and Princess Viktoria Luise, Orville flies 54 minutes 34 seconds and rises to height of 565 feet (172 meters) at Tempelhof Field, near Berlin, a new record.

**SEPTEMBER 18.** Orville flies with student pilot Capt. Paul Engelhard at Tempelhof Field, Berlin, for one hour 35 minutes 46 seconds, a new world's record for flight with a passenger.

Wilbur submits affidavit in Dayton in The Wright Company v. The Herring-Curtiss Company and Glenn H. Curtiss patent suit.

Wilbur leaves Dayton for New York to fly Wright airplane in Hudson-Fulton Celebration, which was to open September 25.

**SEPTEMBER 20-27.** Wright airplane arrives at Governors Island, and Wilbur and his mechanic, Charles Taylor, assemble machine in preparation for Hudson-Fulton Celebration flights.

**SEPTEMBER 23.** Wilbur meets Guglielmo Marconi, inventor of the wireless, who calls on him while engaged in preparations for the Hudson-Fulton Celebration flights.

**SEPTEMBER 29.** Wilbur flies from drill field at Governors Island on a course around the Statue of Liberty on Bedloe's Island and returns.

**SEPTEMBER 30.** Orville reaches an altitude of 902 feet, a new record, in flight at Bornstedt Field, near Potsdam, witnessed by the German Empress, Princess Viktoria Luise, and Prince August Wilhelm.

Herring-Curtiss Company and Glenn H. Curtiss served with court order by Judge John R. Hazel in Buffalo in action by Wright brothers to restrain them from making Curtiss airplanes, Wright Company alleging that these infringed Wright patents.

**OCTOBER 2.** Crown Prince Friedrich Wilhelm is passenger on flight of about 15 minutes with Orville, the first member of a royal family to ride in an airplane. After the flight the Crown Prince presents Orville, as a token of appreciation, with a jeweled stick-pin, a crown set in rubies with the Crown Prince's initial "W" in diamonds.

**OCTOBER 4.** Wilbur flies over the Hudson River from Governors Island to Grant's Tomb and back, a 20-mile flight in 33 minutes 33 seconds. On the flight the airplane passes over the British warships Inflexible and Drake. More than one million New Yorkers witness the flight.

**OCTOBER 5.** Wilbur leaves New York for Washington to train Signal Corps officers in fulfillment of the Wrights' contract with the War Department.

**OCTOBER 8-NOVEMBER 2.** Wilbur instructs first U.S. Army fliers at College Park, making 20 solo flights and 35 instructional flights with three Army Signal Corps officers, Lts. Benjamin D. Foulois, Frederic E. Humphreys, and Frank P. Lahm.

**OCTOBER 9.** Wilbur breaks world airplane speed record over a 500-meter course in a flight of about 1,300 meters in 58 3/5 seconds, attaining a speed of 46 miles per hour.

Wilbur honored at luncheon by faculty of Maryland Agricultural College, located near College Park flying field. He is accompanied by Army officers at the flying field.

**OCTOBER 15.** Orville makes last appearance in Germany in spectacular flight of 25-30 minutes before Emperor

Wilhelm, the Empress, and Princess Viktoria Luise at Bornstedt Field.

**OCTOBER 16.** Orville and Katharine leave for Paris en route to the United States.

**OCTOBER 18.** Orville in Paris visits Port Aviation at Juvisy, accompanied by Georges Tharel, and congratulates his pupil Count Charles de Lambert on spectacular flight from Port Aviation to the Eiffel Tower and return, the first airplane flight over the city of Paris.

**OCTOBER 19.** Lt. Benjamin Foulois gives Wilbur check for \$20,000 as part payment for Wright machine purchased for Signal Corps, balance of \$10,000 to be paid on completion of training of Lts. Frank P. Lahm and Frederic E. Humphreys.

**OCTOBER 20.** Wrights file suit in U.S. Circuit Court against Ralph Saulnier of New York, alleging infringement of their patent by his importation of Bleriot monoplane into the United States.

Wilbur requests that his name be deleted from use in stage production "Inconstant George," by John Drew, being presented at Empire Theatre in New York. His request is granted and a new name substituted on this date.

Ohio Society of New York elects Orville and Wilbur honorary members.

**OCTOBER 23.** Wilbur states in Scientific American that future development of aviation will be in high-altitude flying because of the more favorable atmospheric conditions provided by upper air strata.

Wilbur and Lts. Foulois, Humphreys, and Lahm attend informal luncheon and reception in their honor given by President Richard W. Sylvester and the board of trustees of Maryland Agricultural College.

**OCTOBER 27.** At College Park, Wilbur flies with Mrs. Van Deman, wife of U.S. Army Capt. Ralph H. Van Deman and close friend of Katharine Wright, in a flight of four minutes, reaching an altitude of about 60 feet.

**OCTOBER 29.** Wilbur goes to New York from Washington, returning on October 31, to discuss sale of American patent rights.

The negotiation with New York financiers, initiated by Clinton R. Peterkin, formerly with J. P. Morgan & Company, led to formation of the Wright Company on November 22.

**NOVEMBER 4.** Orville and Katharine arrive in New York from Queenstown and are met by Wilbur and Mr. and Mrs. Courtlandt F. Bishop. Bishop was President of the Aero Club of America.

**NOVEMBER 5.** French consul general in New York, Étienne Lanal, presents Wilbur and Orville with the crosses and diplomas of the Legion of Honor awarded to them in July by the French government. Ceremony is witnessed only by Katharine and Wrights' counsel Pliny W. Williamson.

**NOVEMBER 7.** Wilbur, Orville, and Katharine return to Dayton.

**NOVEMBER 8.** Wilbur and Orville travel to Springfield to consult with their patent attorney.

**NOVEMBER 9.** Orville goes to New York on patent business, returning to Dayton on November 11.

**NOVEMBER 13.** Orville goes to Latonia Race Track, near Cincinnati, to witness exhibition flying and meets Glenn H. Curtiss for first time since patent suits had been instigated against Curtiss.

Wilbur goes to Washington to obtain an affidavit relating to Wright patent suit from Lt. Frank P. Lahm.

Model of Wright airplane built by Milton Wright, Jr., nephew of the Wright brothers, placed on exhibit at Saks & Co. in New York.

**NOVEMBER 20.** Commission d'Aéronautique, Académie des Sciences, in Paris, awards its gold medal for aeronautics to Wilbur and Orville.

The medal was designed by René Boudicon.

**NOVEMBER 22.** Wright Company incorporated, with a capital stock of \$1,000,000 and with Wilbur Wright as president and Andrew Freedman and Orville as vice presidents, Alpheus F. Barnes is secretary and treasurer. Executive committee is composed of Andrew Freedman, chairman, Russell A. Alger, August Belmont, Cornelius Vanderbilt, and Wilbur.

On the death of Wilbur in 1912, Orville succeeded him as president, remaining in this capacity until the company was sold in 1915.

**NOVEMBER 24.** Wilbur and Orville go to New York to attend meeting on November 27 to complete the organization of the Wright Company, which was formed to manufacture their airplanes, and to make arrangements with their attorneys for patent infringement suits against the Herring-Curtiss Company.

**NOVEMBER 27.** Wrights sell their American patent rights to Wright Company for \$100,000 cash, 40 percent of the company stock, and a 10 percent royalty of every machine built.

Cornelius Vanderbilt, Robert J. Collier, and Russell A. Alger, directors of the newly formed Wright Company, order first three airplanes from company.

Wilbur and Orville give affidavits in New York in The Wright Company v. The Herring-Curtiss Company and Glenn H. Curtiss patent suit.

The Wright Company subsequently bore the expense of prosecuting all suits against patent infringers.

**NOVEMBER 28.** Wilbur and Orville return to Dayton.

**NOVEMBER 29.** Wright Company files suit against Claude Grahame-White, alleging that Farman and Blériot machines used by him in the United States for exhibition purposes infringes Wright patent.

**NOVEMBER 30–DECEMBER 1.** Russell A. Alger and Frederick Alger come to Dayton to confer with Wrights on organization of Wright Company and construction of airplane plant.

**DECEMBER 7.** Wilbur goes to New York regarding the setting up of Wright Company New York office.

**DECEMBER 11.** Wilbur and Orville give affidavits in Dayton in The Wright Company v. The Herring-Curtiss Company and Glenn H. Curtiss patent suit.

**DECEMBER 12.** Wilbur goes to New York to consult with Wright Co. lawyers in Curtiss infringement case.

**DECEMBER 13.** Orville goes to Buffalo to attend patent trial case.

**DECEMBER 14–15.** The Wright Company v. The Herring-Curtiss Company and Glenn H. Curtiss patent suit comes to trial before Judge John R. Hazel at Buffalo, with Wilbur and Orville present in court.

**DECEMBER 16.** Wilbur and Orville attend founding meeting of Detroit Aero Club.

**DECEMBER 17.** Orville and Wilbur return to Dayton.

## 1910

Orville and Wilbur issued aviator's licenses Nos. 4 and 5 by Aero Club of America in accordance with Fédération Aéronautique Internationale rules.

**JANUARY.** Ground broken for construction of Wright Company factory in Dayton.

**JANUARY 3.** Preliminary injunction granted to the Wright Company by Judge John R. Hazel for the Federal Circuit Court in Buffalo, N.Y., restraining Herring-Curtiss Company and Glenn H. Curtiss from manufacturing, selling, or using the Curtiss airplane for exhibition purposes.

**JANUARY 4.** On application of the Wright Company, Louis Paulhan, French aviator, is served with injunction restraining him from using several flying machines, claimed to infringe the Wright patents, which were imported into the United States for exhibition purposes.

Wilbur and Orville submitted affidavits in this case on January 5–6. Wilbur submitted additional affidavits on January 22, February 5, March 15–16, and on March 23. He traveled to New York to attend the trial on January 30, returning to Dayton on February 7.

**JANUARY 8.** Wilbur and Orville leave Dayton to attend meeting of Ohio Society of New York on January 10, returning to Dayton on January 14.

**JANUARY 10.** Wrights honored at dinner in New York given by Ohio Society of New York, the topic of the evening being "Ohio in Aviation." Other honored guests are Vice President James M. Sherman and Governor of New Jersey John F. Fort.

In a rare political statement Wilbur predicts that an Ohioan will be the next President.

In interview Orville and Wilbur answer attacks made on them for seeking injunctions against foreign and domestic aviators, stating that the patent laws of the United States are too lax in that they force a patentee to take legal steps to protect his

patent infringement, instead of having the government take this action.

**JANUARY 11.** Editors of Funk & Wagnalls Standard Dictionary write to Wright brothers regarding aeronautical definitions. Orville revises many outdated definitions previously used and is designated department editor for "Aviation and Aeronautics" for the 1913 edition of the dictionary. He continues in this capacity for numerous subsequent editions.

**JANUARY 12.** Orville and Wilbur attend dinner in Boston honoring Octave Chanute.

Remarks by Wilbur on this occasion and by Chanute in an interview reported in the New York World of January 17 threatened to cause a rift in their longstanding relationship.

**JANUARY 17.** Wilbur sends telegram to Roy Knabenshue in Los Angeles inviting him to come to Dayton to discuss the management of exhibition flying business to be organized by Wrights. Knabenshue was subsequently placed in charge of the Wright Exhibition Company organized in March.

**JANUARY 24.** Wrights attend dinner in Dayton honoring Comdr. Robert E. Peary.

**FEBRUARY 8.** Wilbur and Orville go to Washington to receive Smithsonian Institution medals.

Orville returns to Dayton on February 11. Wilbur continues on a trip to the South in search of a site for training aviators during the winter months, returning to Dayton on February 25.

**FEBRUARY 10.** The first Langley Medal, designed by J. C. Chaplain, awarded "for especially meritorious investigation in connection with the science of aerodynamics and its application to aviation," presented to the Wright brothers by Chief Justice Melville W. Fuller on behalf of the Smithsonian Institution. Addresses are delivered on the occasion by Alexander Graham Bell and Senator Henry Cabot Lodge. Wilbur responds for the brothers. They are later entertained at a luncheon at the home of Dr. Bell.

**FEBRUARY 17.** Judge Learned Hand issues temporary injunction to Wright Company in suit against Louis Paulhan for his use of a Farman flying machine, which, it was claimed, infringed the Wright patent, requiring the defendant to file a bond for \$25,000 for one month's flights and affirming earlier decision rendered by Judge John R. Hazel on January 3.

Wilbur reports that he has chosen Montgomery, Ala., as site for training aviators.

This was later the location of Maxwell Air Force Base.

**FEBRUARY 19.** Wilbur arrives in New York to push patent suits against aviators infringing the Wright patents.

**FEBRUARY 23.** Ligue Nationale Aérienne in Paris awards its Aviator Diploma to Wilbur and Orville.

**MARCH.** Wrights are extensively involved in The Wright Company v. The Herring-Curtiss Company and Glenn H. Curtiss patent suit.

Wilbur and Orville submit depositions in Dayton on March 7. Wilbur goes to New York on March 7 and submits affidavit on March 12. He then goes to Buffalo on March 18 and submits affidavit on March 19, returning to Dayton on March 20.

Wright Exhibition company formed, with Roy Knabenshue as manager.

The company continues in operation until November 1911. The fliers are paid by the Wright Company.

Miss Mabel Beck engaged as secretary to Roy Knabenshue. Because of her special competence, Wilbur later selects her to work with him in connection with Wright patent suits. Following his death she became Orville's secretary, continuing in this position until his death.

**MARCH 7.** Smithsonian Institution, in letter to Wilbur, invites Wrights to deposit one of their machines in the National Museum.

German-built Wright airplane shown in Riga, Larvia, at exhibit organized by Riga student aeronautical group.

**MARCH 19.** Wright airplane, intended for use in the Wright brothers' training camp just outside the city of Montgomery, Ala., arrives, accompanied by Charles E. Taylor and students Walter R. Brookins and J. W. Davis.

**MARCH 24.** Orville, accompanied by Spencer Crane, arrives in Montgomery, Ala., from Dayton to undertake training of civilian fliers.

In interview in Baltimore, Md., Wilbur states that he favors cross-country reliability flight in preference to speed contest.

**MARCH 26.** Replying to Dr. Walcott's letter on March 7, Wilbur states that the brothers, in accordance with the preferences of the National Museum, could provide a model showing the general construction of one of their machines, the original 1903 Wright machine, or a model showing the general design of this machine.

**MARCH 26–MAY 5.** Orville conducts flight training school in Montgomery for five students who were to engage in exhibition flying for the Wright Company.

**MARCH 28.** Walter R. Brookins, first civilian student of the Wrights, makes first flight with Orville at Montgomery, Ala.

Brookins completed his flight training on May 3.

Wilbur completes negotiations for purchase of 17-acre tract which Wrights named Hawthorn Hill, in the Dayton suburb of Oakwood. Plans for a house are started.

**APRIL 6.** Orville, awaiting parts for his engine, damaged on April 2, visits State Capitol, in Montgomery, and meets Alabama Governor Braxton B. Comer and other state officials. He is shown spot on which Jefferson Davis stood when he was inaugurated President of the Confederacy.

**APRIL 8.** Wright Company and the Aero Club of America conclude agreement by which the latter agrees to sanction meets only through proper arrangements with the Wrights.

This agreement was publicly announced to members of the Aero Club of America and to its affiliated clubs in a communication dated April 21.

**APRIL 9.** Orville returns to Dayton from Montgomery to obtain parts for his damaged machine.

**APRIL 11.** Dr. Walcott, replying to Wilbur's letter of March 26, sets forth objects illustrating the Wright inventions which are desirable for the National Museum exhibits. Wrights interpret the letter to mean that the Smithsonian Institution did not want an exhibit that would emphasize the fact of their having flown a successful, man-carrying machine in 1903 and make no reply.

**APRIL 21.** Aero Club of America announces in special bulletin to its membership the details of the Wright-Aero Club agreement of April 8.

**MAY-JUNE 8.** Orville and the Wright Exhibition Company fliers make numerous flights at Simms Station in preparation for the air show at Indianapolis, June 13-18.

**MAY 5.** Wright training camp completed in Dayton. Wright company starts school, with Orville in charge of instruction.

This school was in operation from 1910 to 1916.

**MAY 7.** Wilbur, in letter to the editor of Aircraft, responds to statements made by Israel Ludlow and Clément Ader in the May 1910 issue of the magazine concerning his affidavit in the Paulhan infringement suit. He claims Ludlow misrepresented the facts in claiming that Ader flew a thousand feet.

**MAY 19.** Wright Company and Aero Club of St. Louis enter into contract whereby Wright Company licenses aviation meet to be held in St. Louis, October 8-18, 1910, and agrees to provide five or more aircraft and pilots, under the general direction of Roy Knabenshue.

**MAY 21.** Wilbur makes flight of one minute 29 seconds at Simms Station, his last as a pilot in the United States.

**MAY 25.** Orville takes his father, 82 years old, for his first airplane ride, a flight of six minutes 55 seconds, reaching an altitude of 350 feet.

Flight made by Wilbur and Orville together, Orville piloting, the only occasion when two brothers were in the air at the same time.

**MAY 30.** Orville and Wilbur and Wright exhibition fliers Frank Coffyn, Ralph Johnstone, and Walter Brookins visit Indianapolis Motor Speedway in preparation for air show to be held in June.

**JUNE 10.** Wright airplanes sent to Indianapolis.

**JUNE 11.** Wilbur goes to Indianapolis to attend air meet. Orville joins him for opening of meet, and they return to Dayton on June 19.

**JUNE 13-18.** First show of Wright Company exhibition team, Indianapolis, Ind., in which Brookins is star and sets new records.

**JUNE 14.** Circuit Court of Appeals reverses decision of Judge John R. Hazel on January 3 and directs that injunction granted Wright Company be dismissed and requirement for bond be canceled.

**JUNE 19.** Wilbur goes to New York, seeking modification of June 14 decision of U.S. Appellate Court, asking that Herring-Curtiss Company and Glenn H. Curtiss be required to give bond.

**JUNE 22.** Wrights receive honorary doctor of laws degrees from Oberlin College.

**JUNE 29.** First Wright Model B airplane completed.

**JULY 8-16.** Wright Company fliers Walter Brookins, Ralph Johnstone, Frank Coffyn, and Duval La Chapelle make 17 flights in Toronto in fulfillment of contract with International Aviation Association.

**JULY 16.** Scientific American publishes letter from Wilbur sent from Dayton on July 1, in which he disputes statement on June 25 editorial that "Curtiss was using hinged winged tips in his earlier machines, with which he made public flights antedating the open flights of the Wrights."

**JULY 21.** Wright Company and Aero and Motor Club of Asbury Park, N.J., enter into contract providing that Wright airplanes appear at aviation meet to be held at Asbury Park, August 10-13, 15-20. Wright Company fliers Walter Brookins, Ralph Johnstone, Arch Hoxey, Frank Coffyn, and Duval La Chapelle were to be present. Wright Company was to receive \$20,000 of the gross receipts.

Wrights install and conduct experiments with wheels on their machine for the first time at Simms Station, Dayton.

**JULY 24-AUGUST.** Griffith Brewer, British balloonist, member of the Aeronautical Society of Great Britain, first Englishman to fly with Wilbur at Le Mans on October 8, 1908, and close friend of the Wrights, is guest at Wright home in Dayton, the first of many annual visits.

Visits were made in 1910, 1911, 1912, 1913, 1914, 1918 and continued year by year until interrupted by World War II, approximately 30 visits altogether.

**AUGUST 10.** First public appearance of a Wright airplane with wheels under the skids made at air meet at Asbury Park.

Experimental trials with wheels had been carried out by the Wrights as early as July 21.

**AUGUST 11.** Wilbur arrives in Asbury Park to witness flights by Wright Company exhibition fliers and seeks to determine cause of accident on August 10, the opening day of the air meet, in which Walter Brookins was injured.

**AUGUST 12.** Commissioner of Patents declared interference in action against Wilbur and Orville brought by Erastus E. Winkley, an inventor, who developed an automatic control for sewing machines and conceived the idea that this control could be applied to regulating airplane wings and claimed its disclosure at an earlier date than that of Wrights.

**AUGUST 15.** Wright airplane of new design without front elevators arrives at Asbury Park to replace plane damaged on August 10.

This airplane was flown for the first time on August 19.

**AUGUST 19.** Wright Exhibition Company fliers Ralph Johnstone and Arch Hoxsey carry out moonlight flights at Asbury Park, first public night flights on record.

**SEPTEMBER 21.** Wilbur and Orville, together with Clifford B. Harmon, president, National Council, Aero Club of America, are honored at banquet at Dayton Club given by Dayton Aeroplane Club and Dayton Aero Club.

**SEPTEMBER 22.** Orville flies from Simms Station to Dayton, circles city and returns, the first flight over the city of Dayton. Flight is part of an Aviation Day program held during exposition week in Dayton.

**SEPTEMBER 23.** Katharine flies with Orville at Simms Station, Dayton, at an altitude of a thousand feet.

**SEPTEMBER 29.** Wilbur, in a special car attached to an Illinois Central train, follows Walter Brookins, who flies Wright biplane from Washington Park, in Chicago, to the fair grounds in Springfield, Ill., a distance of 192 1/2 miles, establishing a new American cross-country flying record. The flight is sponsored by the Chicago Record-Herald. Stops are made at Gilman, 75 miles, and at Mt. Pulaski, 136 miles.

**OCTOBER 5.** Dayton Aeroplane Club appoints committee to develop plans for the erection of a memorial in Dayton to its honorary members, Wilbur and Orville.

**OCTOBER 12.** Wright Model R airplane, called the "Baby Grand," completed and ready for testing.

**OCTOBER 22.** Orville completes and tests new eight-cylinder engine, developed for use in the Wright Model R, attaining speed of 77 to 78 miles an hour.

**OCTOBER 22-30.** Wright airplanes participate in International Aviation Tournament at Belmont Park, N.Y.

**OCTOBER 23.** Orville, accompanied by Katharine and Alexander Ogilvie, leaves Dayton for New York and arrives at Belmont Park with Wright "Baby Grand" on October 24. Orville and Katharine return to Dayton on November 3.

**OCTOBER 25.** Orville, in Baby Grand, attains speed of between 70 and 80 miles an hour.

**OCTOBER 29.** Baby Grand, piloted by Walter Brookins, is wrecked in preliminary test in preparation for International Aviation Cup.

**OCTOBER 31.** Wilbur and Orville are guests at luncheon given by Alexander Ogilvie at Delmonico's in New York for fliers who had participated in the Belmont Park aviation meet, after declining an invitation by Aero Club of America to a banquet at Plaza Hotel.

**NOVEMBER.** Wright factory in Dayton completed.

In its early period of operation, this factory produced about two airplanes a month. To meet the demands of business a duplicate factory building was erected in 1911.

**NOVEMBER 1.** With Cornelius Vanderbilt, Wright Company director, as passenger, Orville flies at Belmont Park, reaching an altitude of 200 feet and circling the course six or seven times.

This was the first flight for Vanderbilt.

**NOVEMBER 3.** Orville reports week financially successful. Wrights receive \$20,000 for participating in Belmont Park meeting and win \$15,000 in prizes. Wright Company votes Orville and Wilbur \$10,000 and declares dividend of \$80,000.

**NOVEMBER 5.** Wilbur goes to Baltimore to attend aviation meet scheduled to open November 2. Meet postponed on account of high winds.

**NOVEMBER 7.** Orville and Katharine witness departure of Phil O. Parmalee, Wright Company pilot, in Wright airplane carrying 10 bolts of silk, consigned to the Morehouse-Martens Company, from Dayton to Columbus, first use of a plane to carry commercial freight.

**NOVEMBER 13.** Orville leaves Dayton for Europe on business related to the Wright companies in France and Germany, sailing from New York on November 15 on the Kronprinzessin Cecilie, arriving in Berlin on November 23.

**NOVEMBER 17.** Wright Exhibition Company flier Ralph Johnstone killed in crash at Overland Park, Denver. Wilbur, in New York, accompanies widow to her home in Kansas City, Mo., and attends Johnstone's funeral there.

**NOVEMBER 24.** Orville writes Wilbur from Berlin on this date and again on November 27, reporting that the German Wright Company is being managed inefficiently and despairs that the company will ever be financially successful. The report on the French Wright Company is equally unfavorable.

**NOVEMBER 25.** Wilbur attends funeral of Octave Chanute in Chicago. Chanute had died on November 23, age 79.

**NOVEMBER 29.** Wrights file bill of complaint in U.S. Circuit Court, Southern District of New York, in suit for \$29,000 for infringement and accounting against Claude Grahame-White by reason of defendant's use of Farman and Blériot flying machines in the United States.

These machines are alleged to infringe the Wright patent.

**DECEMBER 6.** Wright Company institutes suit against the Aero Corporation, Ltd., for \$15,000 claimed due as bonus for participation of Wright machines in Belmont Park aviation meet.

This suit was dismissed by Justice Daniel F. Cohalan of the New York Supreme Court, January 19, 1912, on grounds that the Wrights had insufficient cause for action.

**DECEMBER 17.** In letter to editor of Aero, Wilbur replies to editorial in November 26th issue, which he claimed distorted his views, and states that the Wrights believed in "all kinds of flying which demonstrate the merits of the machine."

**DECEMBER 26.** Frank H. Russell, manager of the Wright Company, reports that the company has granted Ralph Johnstone's widow, who was returning to Berlin, an annuity of 300 marks per month for a period of 15 years.

**DECEMBER 29.** Orville arrives in Dayton following European trip.

**DECEMBER 31.** Wright Exhibition Company flier Arch Hoxsey killed in Los Angeles. Wright Company bears cost of funeral expenses and contributes money to his mother, Mrs. M. C. Hoxsey.

**DECEMBER 31–JANUARY 7, 1911.** Wright "Roadster" and Wright standard Model B exhibited at New York Aero Show, a part of the automobile show.

## 1911

**JANUARY.** Wilbur's tribute to Octave Chanute, written shortly after Chanute's death on November 23, 1910, published in Aeronautics.

Wilbur attempts to define Chanute's place in aeronautical history and concludes: "his writings were so lucid as to provide an intelligent understanding of the nature of the problems of flight to a vast number of persons who would probably never have given the matter study otherwise, and not only by published articles, but by personal correspondence, and visitation, he inspired and encouraged to the limits of his ability all who were devoted to the work . . . In patience and goodness of heart he has rarely been surpassed. Few men were more universally respected and loved."

**JANUARY 4.** Wilbur and Orville go to New York to attend annual meeting of the Wright Company, Orville returning to Dayton January 8, Wilbur going on to Washington and returning to Dayton on January 16.

**JANUARY 5.** On Aviation Day at International Automobile and Aero Show, Wilbur and Orville visit their exhibit at the Grand Central Palace and are greeted by friends and admirers at informal reception at the company booth.

**JANUARY 14.** Sixth annual banquet of the National Geographic Society in Washington honors U.S. Army and the invention of the airplane by the Wright brothers. Wilbur makes brief address.

Distinguished guests include Henry Gannett, president of the society; Gen. John M. Wilson, former Chief of Engineers, toastmaster; President William Howard Taft, several ambassadors, and numerous high-ranking Army officers.

Wright Company and Burgess Company & Curtiss sign contract licensing latter to construct airplanes incorporating Wright patents.

This was the first licensed aircraft manufacturer in the United States.

**JANUARY 23.** Wright flying school opens in Augusta, Ga., in charge of Frank Coffyn, with W. Starling Burgess of Boston and George H. Manner of Baltimore as first pupils.

**JANUARY 26.** French Wright Company suit against Henri Farman, Louis Bleriot, and others opens in Civil Court in Paris.

**FEBRUARY 7.** Wilbur attends meeting of directors of Wright Company in New York, returning to Dayton February 8.

**FEBRUARY 20–25.** Wright model B airplane exhibited at Boston Aero Show.

**MARCH 4.** Henry Peartree, Flint & Co. attorney in Paris, telegraphs Wrights that it is extremely important that they come to France to give testimony in French patent case and notifies them on March 8 that the court will hear testimony from them.

**MARCH 9.** Wright brothers offer to train one pilot for the U.S. Navy, contingent upon the purchase of a Wright airplane for the sum of \$5,000.

Navy orders a Wright airplane in July, when appropriations for next fiscal year become available.

**MARCH 12.** Wilbur leaves Dayton en route to Paris to testify in French Wright patent suit, returning to Dayton on August 10.

**MARCH 14.** He sails from New York aboard the Kronprinz Wilhelm, arriving March 21 in Plymouth.

**MARCH 21.** New Wright patent No. 987,662, applied for February 17, 1908, granted.

**MARCH 24.** Wilbur testifies in Paris before the Third Civil Tribunal of the Seine, which was holding hearings in the suit brought by the French owners of the Wright patents against Henri Farman, Louis Bleriot, and others for infringements.

**MARCH 29.** Lt. John Rodgers, U.S. Navy, arrives in Dayton "to confer with Wright Brothers for instruction in the art of aviation."

**MARCH 31.** Wilbur writes Orville from Le Mans that poor management and business practices of the French Wright Company, Compagnie Générale de Navigation Aérienne, have hindered the sale of Wright airplanes in France.

**APRIL 23.** Wilbur visits widow of Otto Lilienthal in Berlin to ascertain her financial status and to view Lilienthal's old flying grounds.

**APRIL 29.** French Third Civil Tribunal renders patent decision favorable to the Wrights.

**MAY 1.** Wright Company and United States Aeronautic company, New Haven, sign contract licensing latter to manufacture airplanes incorporating the Wright patent.

**MAY 3.** Orville attends dinner, sponsored by the Manufacturers Club of Cincinnati, honoring Baron Paul d'Estournelles de Constant, who was visiting the United States.

Baron d'Estournelles de Constant was a friend of Wilbur when he was flying in France in 1908.

**MAY 4.** War Department approves sending the Army's first Wright airplane to the Smithsonian Institution.

**MAY 7.** Lt. John Rodgers of the Navy and Lts. Henry H. Arnold and Thomas DeW. Milling of the Army, after arriving in Dayton to take flying lessons at Wright Flying School, dine with Wright family.

**MAY 8.** Orville admitted as honorary member of Atlantic City Aeronautic Society.

**MAY 20.** Miss Sadie I. Fuller of Oshkosh, Wis., brings suit against Wright Company in Dayton for \$5,000 for alleged injury

suffered when Wright airplane piloted by Arch Hoxsey swooped down on her while she was in grandstand at air meeting in Milwaukee on September 18, 1910.

**MAY 28.** In letter to August Belmont, Orville states that present Wright Company practice is to grant licenses to promoters of air meets on a basis of about 20 percent of the amount put up in prizes in the case where nothing is paid to the fliers for appearing, and on the basis of 10 percent of the gross gate receipts and grandstand receipts in cases where these furnish the entire income for conducting the meet.

**JUNE.** Wilbur comes to England and stays with Alexander Ogilvie for several weeks at Eastchurch on Sheppey Island.

Ogilvie was practicing flying the Baby Wright airplane in preparation for flying it in the Gordon Bennett aviation race, to be held in Eastchurch.

**JUNE 3.** In statement to press in Dayton Orville declares that, despite recent air records established in Europe, America is in no danger of losing leadership in world aviation.

**JUNE 13.** Wright School of Aviation opens at Belmont Park, N.Y., with Arthur L. Welsh, Wright licensed pilot, as instructor.

**JUNE 28.** Wilbur writes Orville from Berlin reporting on excessive time required in the training of German pilots. He writes, "The poor Captain [Paul Engelhard?] cannot understand how you can train men in a week at home. He would not believe that I could carry two men with 375 turns of the propellers till I took him up [April] and did it."

This statement contradicts the common belief that the last flight by Wilbur as a pilot occurred on May 21, 1910, at Dayton.

**JULY 3.** Wrights serve summons on René Barrier, René Simon, and St. Croix Johnstone to cease exhibition flying at aviation meet in Detroit, Mich.

**JULY 8.** Management of aviation meet scheduled under the auspices of the Aero Club of Illinois for Grant Park, Chicago, August 13–20, refuses demands of Wright Company for 20 percent of gate receipts on account of their patent rights.

**JULY 12.** Orville and Wilbur elected honorary members of Aero Club of New York.

**JULY 15.** Orville test-flies Wright hydroplane B-1 at Simms Station, first Wright airplane to be delivered to the U.S. Navy.

The B-1 is delivered at Annapolis, Md., on July 19.

**JULY 26–AUGUST 1.** Orville accompanies Lt. Frank P. Lahm on series of 10 training flights at Simms Station, Dayton.

**AUGUST 2.** Orville goes to New York to attend meeting of Executive Committee of Wright Company and stays until arrival of Wilbur from Europe on August 9.

**AUGUST 9.** Wilbur returns from Europe aboard Oceanic after six months' stay and is met at pier by Orville.

The Wrights later attend a meeting of the Executive Committee of the Wright Company in New York and then return to Dayton.

**AUGUST 10.** Wright Company enters seven Wright fliers in Chicago International Aviation Meet to be held August 12–20, the first time Wright flier had taken part in a meet not licensed by the Wrights.

Participating were Walter Brookins, Philip O. Parmalee, J. Clifford Turpin, Leonard Bonney, Arthur L. Welsh, Howard Gill, and Frank T. Coffyn.

**AUGUST 11.** Orville goes to Chicago to attend Chicago International Aviation Meet.

**AUGUST 17.** Wrights file suit against promoters of aviation meet in Chicago alleging that airplanes used infringed their patents.

**AUGUST 24–SEPTEMBER 5.** Orville accompanies Capt. Charles DeF. Chandler, Commanding Officer of the newly established Signal Corps flying school at College Park, who was on temporary duty at Dayton to receive special instruction with the Wright Company, on series of training flights at Simms Station, Dayton.

**SEPTEMBER 13–14, 16.** Wilbur submits depositions in New York in The Wright Company v. The Herring-Curtiss Company and Glenn H. Curtiss patent suit.

**SEPTEMBER 15.** Wright Company signs agreement with Aero Club of St. Louis providing for participation of Wright Company in aviation meet to be held in St. Louis, October 14–22.

**SEPTEMBER 18.** Alexander Ogilvie arrives in Dayton from England for visit with Wrights.

**OCTOBER 7.** Orville leaves for Kitty Hawk, N.C., accompanied by his brother, Lorin, his nephew, Horace, and Alexander Ogilvie, to conduct gliding experiments, arriving there October 10. Orville leaves Manteo October 30 and returns to Dayton October 31.

**OCTOBER 16–26.** Orville makes about 90 glides from Kill Devil Hill, Little Hill, and West Hill.

**OCTOBER 18.** Orville escapes injury when his glider turns over in the air in a 35-mile gale and falls 14 feet to the ground. Both left wings and the rear horizontal surface of the glider are broken, requiring extensive repairs. The glide is witnessed by John Mitchell, Associated Press reporter.

**OCTOBER 23.** Orville escapes injury for the second time in a week when glider turns over in the air and crashes to the ground, breaking vertical and horizontal rudders.

**OCTOBER 24.** Orville establishes new soaring time record of nine minutes 45 seconds at Kitty Hawk, N.C., in a 50-mile wind.

This time remained a world's record until exceeded in Germany 10 years later.

**OCTOBER 26.** Wright Signal Corps 1909 flying machine placed on exhibit in National Museum following necessary

repairs made at Wright Company factory in Dayton, where it had been shipped following use at San Antonio, Tex.

**NOVEMBER 4, 8, 9.** Wilbur and Orville experiment with and fly a Curtiss machine at Simms Station, Dayton, to gain familiarity with the control mechanisms which they claimed infringed the Wright patents, then in suit in courts.

**DECEMBER 2.** Wrights send widow of Otto Lilienthal, Mrs. Agnes Lilienthal, in Berlin, a check for \$1,000 as a token of their appreciation of Lilienthal's contribution to aeronautics.

**DECEMBER 12.** Judge Learned Hand, in U.S. Circuit Court, grants injunction to Wright Company to restrain Claude Grahame-White, English aviator, from flying in the United States without permission of the Wrights.

**DECEMBER 13.** Wright Company brings suit for \$50,000 against Claude Grahame-White to obtain an accounting of profits from flights made by him in the U.S. before November 29, 1910.

## 1912

**JANUARY 9–10.** Wilbur and Orville give depositions in Dayton in E. E. Winkley v. Orville & Wilbur Wright suit.

Testimony is given on the conception of their patent No. 415,105, filed February 10, 1908. Several drawings used for their patent application and correspondence with Katharine Wright and Harry A. Toulmin regarding it are introduced into the record.

**JANUARY 15.** Wilbur is subjected to direct and cross-examination in a suit brought by the Wright Company against the Aero Corporation, Limited, December 6, 1910, to recover \$15,000 claimed as balance due the company under an agreement made with the corporation before the Belmont Park aviation meet in September 1910.

Wright Company announces that after January 1, 1912, and until a patent adjudication has been secured by the Wright Company, a 75 percent cash discount will be allowed from the per diem royalties for the use of flying machines for exhibition purposes.

**JANUARY 20–21.** Wilbur visits U.S. Signal Corps Flying School at Augusta, Ga., consulting Capt. Charles DeF. Chandler and Lts. Henry H. Arnold and Roy C. Kirtland regarding a projected new Wright military airplane.

**JANUARY 24.** Judgment of \$1,700 for complaint decreed by U.S. Circuit Court, Southern District of New York, in The Wright Company v. Claude Grahame-White infringement suit.

**JANUARY 27.** At insistent request of Robert J. Collier, Wilbur attends sixth annual banquet of the Aero Club of America, held at Sherry's in New York, and hears "The Sons of an Eagle-Bird," a song written by Arthur Guiterman and dedicated to the Wright brothers.

He returns to Dayton January 31.

**FEBRUARY 14–MARCH 2.** Wilbur testifies at length in Dayton in The Wright Company v. The Herring-Curtiss Company and Glenn H. Curtiss patent suit.

**FEBRUARY 22.** German Patent Office invalidates the basic features of the German Wright patents because of disclosure in publication before filing of patent application. Wrights appeal this decision.

The disclosures cited were those contained in a report of a speech by Octave Chanute published in *L'Aéronaute*, May 1903, and by Wilbur Wright in his 1901 address before the Western Society of Engineers, a synopsis of which appeared in *Automotor*, February/March 1902.

**MARCH 14.** Wrights address letter to the editor of the *Scientific American*, setting forth the grounds for the German Patent Office decision of February 22, nullifying the main claims of the German Wright patent.

The letter was published in the *Scientific American*, March 30. Identical letters were sent to Aero, New York (published March 23), *Aeronautics*, New York (published March), *Flight*, London (published April 6), and *Fly Magazine*, Philadelphia, Pa. (published April).

**MARCH 20.** Wrights complete and test new six-cylinder motor.

**MARCH 30, APRIL 2, 3, 4.** Wilbur testifies in Dayton in suit brought against the Wright Company by Charles H. Lamson in 1910 for alleged infringement of his kite patent No. 66,427, issued January 22, 1901.

**APRIL.** Prompted by the erection of a monument to Louis-Pierre Mouillard at Heliopolis, Egypt, February 25, 1912, Wilbur contributes article entitled "What Mouillard Did" to *Aero Club of America Bulletin*, refuting claims that Mouillard conceived the use of wing warping and its application to lateral control in an aircraft.

**APRIL 5.** Orville testifies in Charles H. Lamson v. Wright Company suit, telling of early Wright experiments, particularly their kite experiments in 1899.

The case was dismissed in June.

**APRIL 18.** Wilbur leaves for New York to arrange a contract with *Aero Club of America*.

**MAY.** In article entitled "What Clément Ader Did," contributed to *Aero Club of America Bulletin*, Wilbur disparages French claims for Ader as the first to achieve heavier-than-air flight.

**MAY 2.** Wilbur becomes ill on visit to Boston, and on his return to Dayton on May 4 doctor diagnoses illness as typhoid fever.

**MAY 4.** Wilbur writes to Frederick P. Fish, probably Wilbur's last letter, urging that because of threatening competition the hearing of the Herring-Curtiss case be continued and not postponed until autumn.

**MAY 9.** Orville elected a vice president of the *Aeronautical Society* at Society's annual meeting in New York.

**MAY 10.** Wilbur makes last will and testament, witnessed by Ezra Kuhns, lawyer, and Miss Mabel Beck, secretary to Wrights.

Wilbur wills \$1,000 to his father, \$50,000 each to his brothers Reuchlin and Lorin and his sister Katharine, and to Orville the balance and residue of the estate, estimated to be about \$126,000.

**MAY 16.** Orville goes to Washington to deliver and demonstrate new Wright machine for the purpose of winning War Department contract.

**MAY 17.** Orville instructs Arthur L. Welsh in manner of handling of new Wright Type C, M-1, airplane.

**MAY 20.** Orville hurriedly returns to Dayton from Washington on receipt of news that Wilbur has had relapse.

**MAY 30.** Wilbur dies at age 45, following illness extending over a period of four weeks; Wright family is at his bedside.

Tributes were paid him from home and abroad, including messages from President William Howard Taft, Gen. Leonard Wood, Chief of Staff, Gen. James Allen, Capt. Charles DeF. Chandler, and other high-ranking Army officers, and Secretary of War Henry L. Stimson. The President's message reads: "I am sorry that the father of the great new science of aeronautics is dead, and that he has not been permitted to see the wonderful development that is sure to follow along the primary lines which he laid down. He deserves to stand with Fulton, Stephenson and Bell."

**MAY 31.** Representative Timothy T. Ansberry, of Ohio, introduces H.Res. 560, expressing regret of the House on learning of the death of Wilbur Wright, of Dayton, Ohio, "who rendered his country incalculable service in the science of aeronautics."

Board of Directors of Wright Company at special meeting adopts resolution of sympathy to Wright family. Pliny W. Williamson comes to Dayton to represent the company at funeral services.

**JUNE 1.** Wilbur's body lies in state at First Presbyterian Church in Dayton, Rev. E. Maurice Wilson conducts the funeral service, and burial is in Woodland Cemetery. Honorary pallbearers are Robert J. Collier, Charles Jerome Edwards, Russell A. Alger, Fred Alger, John H. Patterson, Hon. James M. Cox, Dr. Levi Spitler, and Dr. D. B. Conklin.

**JUNE 7.** Committee on Memorial to Wilbur Wright, in communication to Aero Club of Pennsylvania, recommends that the Aero Club of Pennsylvania take steps to create a Wilbur Wright Chair of Aerodynamics.

**JUNE 12.** Orville, accompanied by Katharine, goes to Washington to attend funeral at Adas Israel Congregational Cemetery on June 13 of Arthur L. Welsh, Wright Company exhibition flier who was killed in an accident at College Park, Md., on June 11.

Welsh was conducting the official Army acceptance tests of the Wright Type C, M-1 airplane for the Wright Company and was a passenger in the plane being flown by Lt. Leighton W. Hazelhurst, who was also killed.

**JUNE 14.** Orville and Katharine attend funeral at Arlington Cemetery of Lt. Leighton W. Hazelhurst.

**JUNE 15.** Orville and Katharine arrive in New York from Washington to attend Wright company business meeting on June 17 and return to Dayton on June 18.

**JUNE 26.** Monmouth County N.J., Circuit Court renders decision in favor of the Wright Company in \$25,000 suit brought by Morris Gersuch, whose arm was broken by a Wright airplane piloted by Walter Brookins, when the machine crashed into the grandstand at Asbury Park, N.J., aviation meet on August 10, 1910.

**JULY.** Announcement is made that the Aeronautical Society of Great Britain is opening a subscription fund for the establishment of a memorial to Wilbur Wright in "appreciation of his great work and in recognition of the support he gave to the Aeronautical Society of Great Britain." This was to take the form of an annual lecture called the "Wilbur Wright Lecture."

Griffith Brewer was to be in charge of the organization and collection of this fund.

Dayton Wright Memorial Commission recommends that a memorial in the form of two Greek columns be erected at Huffman Prairie (Simms Station), in Dayton, in memory of Wilbur.

**AUGUST 7.** U.S. Patent Office examiner of interference awards priority of invention to Wright in interference suit brought in Patent Office by Erastus E. Winkley, August 12, 1910.

**AUGUST 17.** Baron Paul d'Estournelles de Constant initiates movement to raise a subscription for the erection of a monument at the Auvours training camp at Le Mans to commemorate Wilbur Wright's achievements there in the autumn of 1908.

**SEPTEMBER.** Wilbur's article on Otto Lilienthal published posthumously in Aero Club of America Bulletin.

This was his last article and was written a day or two before he was stricken with typhoid fever. He attempts to define Lilienthal's place in aeronautical history and states: "Of all the men who attacked the flying problem in the 19th century, Otto Lilienthal was easily the most important . . . Lilienthal was the real founder of out-of-door experimenting. He was without question the greatest of the precursors, and the world owes to him a great debt."

**OCTOBER 27.** Wright airplane B-2 delivered to U.S. Navy.

**DECEMBER 6, 8.** Orville experiments with his automatic stabilizer at Simms Station, Dayton.

## 1913

**JANUARY 13.** At Simms Station Orville conducts test of his automatic stabilizer with plane rudder.

**FEBRUARY 10.** Orville, accompanied by Katharine, leaves Dayton en route to Europe on business relating to a patent suit in Germany.

This was his last trip to Europe.

**FEBRUARY 12.** Orville and Katharine sail for Europe aboard Mauretania, arriving in London on February 17, where they are met by Griffith Brewer and Alexander Ogilvie.

**FEBRUARY 18.** Orville and Katharine attend Aero Show at Olympia, Kensington, London.

**FEBRUARY 19–20.** Orville and Katharine are overnight guests of Alexander Ogilvie at Sheppeney, England.

**FEBRUARY 21.** British Wright Company, Ltd. formed, with Orville serving as chairman of the board of directors. Orville attends meeting of the directors.

**FEBRUARY 22.** Orville and Katharine leave London for Berlin, arriving there on February 23, and go to Leipzig on February 26 to attend German Wright patent trial before German Supreme Court.

**FEBRUARY 26.** U.S. Ambassador Myron T. Herrick gives luncheon in Paris attended by numerous members of the Aéro-Club de France and by the members of the Wilbur Wright Le Mans Memorial Committee in charge of arrangements for the erection of a memorial to Wilbur at Camp d'Auvours, near Le Mans, where he made his first public flights in 1908. A message of tribute from President Taft is read.

German Supreme Court renders decision favorable to the Wrights, granting protection to their use of wing warping in connection with a rudder.

**FEBRUARY 27.** Judge John R. Hazel, of U.S. District Court in Buffalo, grants Wright brothers' petition for order restraining Glenn H. Curtiss and others from manufacture and sale of alleged infringing machines.

**FEBRUARY 28.** Orville holds consultation with Dr. V. Schneider on German Flugmaschine Wright.

**MARCH 1.** Orville goes to Dresden to Harlan-Werke to discuss licensing of Wright airplanes.

**MARCH 9.** Orville and Katharine sail for the U.S. aboard George Washington after their European trip, arriving in New York on March 17 and in Dayton on March 19.

**MARCH 13.** French patent decision rendered in favor of Wrights.

**MARCH 25–27.** Disastrous Miami River flood causes considerable damage to the Wright family home and property, including damage to their collection of glass plate photographic negatives and to early business and aviation records.

**APRIL.** Henry County (Ind.) Historical resolution recommending that a tablet be placed on wall of building where Wilbur was born.

**MAY 1–3.** Orville experiments with his Model CH, the first Wright Hydroplane, on the Miami River.

**MAY 21.** Wilbur Wright Memorial Lecture inaugurated by the Royal Aeronautical Society, London, honoring the life and work of Wilbur Wright.

**MAY 26.** Queen City Aero Club of Cincinnati elects Orville honorary member.

U.S. Patent Office examiner in chief affirms decision of August 7, 1912, in interference suit brought August 12, 1910, by Erastus E. Winkley against Wright Company.

**JUNE 5.** Orville flies up Miami River with three passengers in Wright airplane equipped with wooden pontoons.

**JUNE 14.** Orville flies hydroplane on Miami River.

**JUNE 18.** Orville accepts appointment to serve on the Subcommittees on Aircraft Factories and Hydromechanics in Relation to Aeronautics, Langley Laboratory of the Smithsonian Institution. Capt. Holden C. Richardson served as chairman.

**JULY.** New incidence indicator designed by Orville is marketed by Wright Company.

**JULY 1.** Wright model CH seaplane announced.

**JULY 8.** Orville goes to New York to attend Wright Company Executive Committee business meeting, returning to Dayton on July 11.

**JULY 9.** Board of managers of the Franklin Institute in Philadelphia elects Orville as nonresident member.

**JULY 10.** Orville appoints Grove C. Loening as an engineer with the Wright Company, effective July 14.

Loening remains with Wright Company for one year, resigning effective July 15, 1914.

**SEPTEMBER–NOVEMBER.** Orville conducts experiments with new automatic control and completes its development.

**SEPTEMBER 20.** Orville Wright flies in a single-propeller machine for the first time.

**SEPTEMBER 30.** Wright model G aeroboot announced.

**OCTOBER.** British Wright Company enters suit for £25,000 against the British government for infringement of the Wright patent.

**OCTOBER 14.** Wrights granted patent No. 1,075,533 for a device for maintaining automatic stability of an aircraft. The patent application was originally filed February 10, 1908.

**DECEMBER 17.** Orville attends dinner in his honor given by Aero Club of America in New York and is presented with "Wright Memorial Book" which had been compiled by the Aero Club of America "to commemorate the discovery by Wilbur and Orville of the correct principles of maintaining equilibrium in the air."

The edition was limited to three copies, the first to be presented to Orville, the second to be preserved in Aero Club of America archives, and the third to be given to the Smithsonian Institution.

Material in the volume relates to the presentation of Aero Club of America gold medals to the Wright brothers by President Taft on June 10, 1909, including resolutions of Congress, photographs of the medals, President Taft's speech of presentation, messages from the governors of 10 states, 13

scientific institutions, and numerous editorials and cartoons marking the occasion.

Reichsflugverein, E. V. in Berlin (formerly Verin Deutscher Flugtechniker), in meeting attended by numerous aviators, engineers, and scientists, observes 10th anniversary of 1903 flight, paying homage to Orville, an honorary member of the Society.

**DECEMBER 18.** Orville meets Thomas A. Edison for the first time when he is a guest of the Edison family at Llewellyn Park, Orange, N.J. He later inspects the Edison Laboratories.

Orville attends dinner marking 10th anniversary of 1903 flight given in his honor in New York by the Aeronautical Society, at which a set of engrossed resolutions and a bronze figure by Auguste Moreau are presented to him.

**DECEMBER 19.** Léon Bollée, in his will, bequeaths first engine used by Wilbur in his 1908 flights at Le Mans, France, to the Le Mans Museum.

**DECEMBER 31.** Orville demonstrates his automatic stabilizer in 17 flights at Simms Station at Dayton, Ohio, before committee of the Aero Club of America. The committee members are Dr. L.E. Custer, dentist, Dr. John C. Eberhardt, optometrist, both from Dayton, and Grover C. Loening, aeronautical engineer, of New York. In the last and conclusive demonstration Orville makes seven successive turns with his hands completely removed from the controls of the airplane.

## 1914

**JANUARY 5.** Orville describes his automatic stabilizer in dispatch to London Daily Mail, which published the account on January 6.

This constituted first published report of the device.

**JANUARY 8.** Orville elected honorary member of the Rotary Club of Dayton.

He had been a member since November 1912.

**JANUARY 13.** U.S. Circuit Court of Appeals of New York renders decision in favor of the Wright company in its suit, begun in 1909, against the Herring-Curtiss Company and Glenn H. Curtiss, recognizing the Wright patent as a pioneer patent entitled to very broad construction, and permanently enjoining Curtiss from manufacturing or selling airplanes in which two ailerons functioned simultaneously to produce different angles on the right and left wingtips.

**JANUARY 21.** Alpheus F. Barnes, secretary of the Wright Company, visits Orville in Dayton to obtain bill of damages to be presented to the Curtiss Aeroplane Company as a result of the court decision rendered January 13.

**JANUARY 26.** Orville, accompanied by Katharine, travels to New York for conference with his business associates in the Wright Company, Alpheus F. Barnes, secretary, and Andrew Freedman, director.

**FEBRUARY 5.** Orville attends meeting of the Dayton Rotary Club, where announcement is made that he has been awarded the Aero Club of America Trophy for 1913, donated by Robert J. Collier, for "the development of his automatic stabilizer."

**FEBRUARY 11.** Orville declares that a trans-Atlantic trip in an airplane was impracticable at the time.

The statement was made in reference to the proposed flight by Rodman Wanamaker in a flying boat being constructed by Glenn H. Curtiss.

**FEBRUARY 20.** Wright Company sends circular letter to manufacturers, users, and exhibitors warning of prosecution if using Wright-type machine without license.

This notice followed favorable court decision rendered January 13.

**FEBRUARY 25.** Orville goes to New York on business involving the Wright Company, attending a company meeting on February 27, going to Washington on February 27, and returning to Dayton on March 1.

**FEBRUARY 26.** In interview in New York reported in New York Times, Orville declares that inventors are poorly protected by present patent laws—that patents have little relative value because of excessive costs of litigation in courts required to maintain claims. He attributes illness and death of his brother to delays of the law's processes relative to patents.

Subsequently Secretary of the Interior Franklin K. Lane sent Orville a letter outlining his intention to revise the patent laws in order that American inventors may secure more adequate protection.

**MARCH 6.** Committee on Science and the Arts of the Franklin Institute in Philadelphia votes to award Orville the Elliott Cresson medal "in recognition of the epoch-making work accomplished by you at first, together with your brother Wilbur, and latterly, alone, in establishing on a practical basis the science and art of aviation."

**SPRING.** Orville obtains controlling interest in Wright Company through purchase of additional stock, buying the shares of all other shareholders in the Wright Company except those of his friend Robert J. Collier.

**APRIL 10.** National Policemen's Club elects Orville honorary member.

**APRIL 18.** Announcement is made that Orville has perfected a new type elevator device to supplement the automatic stabilizer in use to prevent "dives."

**APRIL 28.** In absence of Orville, Bishop Milton Wright and Katharine move from 7 Hawthorn Street in Dayton, occupied by the Wright family since 1871, to Hawthorn Hill, Oakwood, Dayton.

Orville was to live here until his death in 1948.

**MAY 1.** Orville is a founding member of Engineers' Club of Dayton.

**MAY 13.** Orville elected second vice president of Engineers' Club of Dayton.

**MAY 19.** Orville leaves for Philadelphia to deliver lecture before the Franklin Institute, returning to Dayton on May 22.

**MAY 20.** Orville delivers lecture on "Stability of Aeroplanes" before the Franklin Institute, Philadelphia. He receives Franklin Institute's Elliot Cresson Medal.

**MAY 21.** Governor of Ohio James M. Cox names Orville as member of Ohio State Board of Commissioners of the World Peace Foundation, Boston.

**MAY 23.** Lincoln Beachey granted first Wright Company license, terms being \$1,000 a calendar year and \$25 for each day of paid flying.

Beachey, under license, flies for first time at Brighton Beach, N.Y.

**JUNE 6.** Griffith Brewer comes to Dayton to visit with Orville and Katharine for three months to write a book on the history of aviation. He goes to Hammondsport, N.Y., and observes the many changes being made in the Langley Aerodrome before tests of the machine by Glenn H. Curtiss.

**JUNE 9.** Wright Company releases announcement stating that to obtain a license to fly, an owner of an airplane that infringes the Wright patent must pay a fee of \$1,000 to the Wright Company and, in addition, \$25 for each day the machine is operated or exhibited for profit or prize.

**AUGUST 1.** Orville attends exhibition flying by Lincoln Beachey and Barney Oldfield at Dayton Fairgrounds.

**AUGUST 21.** Orville narrowly escapes drowning when a late model hydroplane he was piloting, with U.S. Navy Lt. Kenneth Whiting as a passenger, falls into the Miami River near Dayton.

**SEPTEMBER.** Orville's address on "Stability of Aeroplanes," delivered at Franklin Institute on May 20, published in Journal of the Franklin Institute.

**OCTOBER 16.** British Wright Company is awarded £15,000 by the British government "in payment for the use of the Wright patent in building aeroplanes patented by them."

**NOVEMBER 16.** Wright Company files bill of complaint against the Curtiss Aeroplane Company. In affidavit of this date, prepared in Dayton, Orville states that, despite earlier decrees and judgments in favor of the Wright Company, the Curtiss Aeroplane Company is continuing to manufacture, use and sell flying machines which infringe the Wright patent.

**DECEMBER 14.** Orville confers in New York with Israel Ludlow and Arthur W. Johns, associated with the Aero Club of America, discussing the movement by the U.S. government to secure the purchase of the Wright patents.

**DECEMBER 29.** Wrights issued supplementary patent No. 1,122,348, incorporating improvements on their original patent and strengthening their claim to the invention of the airplane.

The patent application was filed February 17, 1908.

## 1915

**JANUARY 14.** Orville is scheduled to be guest of honor of the Aero Club of America at its ninth annual dinner at the St. Regis

hotel in New York but is unable to attend because of illness which confines him to bed. The club and its guests vote a resolution of sympathy.

**FEBRUARY 24.** Glenn L. Martin visits Orville at his home in Dayton.

**MARCH 14.** Orville's interview with Earl N. Findley, in which Orville discusses the role of the airplane in war, published in New York Tribune.

**MARCH 31.** Polytechnic of Chicago confers degree of doctor of philosophy on Orville.

**APRIL 24.** Orville files affidavit in Dayton in The Wright Company v. Curtiss Aeroplane suit and gives extensive testimony on Langley flying machine and the 1914 tests on the machine conducted at Hammondsport, New York.

**MAY 10.** Orville files affidavit in Dayton in The Wright Company v. Curtiss Aeroplane suit, states that he has reason to believe but has been unable to prove, that knocked-down Curtiss aeroplanes were being shipped to England and assembled there with the incorporation of a double acting aileron control.

**MAY 19.** Orville goes to New York to confer with representative of the Connecticut Aircraft Company of the issuance of an exclusive manufacturing license to the Connecticut Company under Wright patents, returning to Dayton on May 23.

**JUNE 4.** Lorin Wright travels from Dayton to Hammondsport, N.Y., to observe new trials of the Langley Aerodrome being conducted there by Glenn H. Curtiss in the interests of an upcoming court trial in suit brought against Curtiss by the Wright Company.

Lorin reports his observations of the trials to Orville in a letter on this date.

**JUNE 23.** Orville receives honorary doctor of science degree from Trinity College, Hartford, Conn.

**JULY 12.** Orville goes to New York, returning on July 15, accompanied by Earl N. Findley of New York Tribune and John R. McMahon.

**JULY 13.** Orville named by Secretary of the Navy Josephus Daniels to serve with Thomas A. Edison and Henry Ford on new civilian Naval Board of Invention and Development.

**JULY 14.** Orville writes his first newspaper story for the New York Tribune, giving his opinion on the problem of aerial defense and declaring that it would be folly for the United States to engage in war at the present time owing to the unpreparedness of the country in aeronautical equipment.

**JULY 22.** Orville named vice president of newly organized American Society of Aeronautic Engineers.

**JULY 31.** Fred C. Kelly's first interview with Orville on May 10 published in Colliers. Orville states that the airplane will prevent war by making its cost prohibitive.

**AUGUST.** Smithsonian Institution publishes in its 1914 annual report statement to the effect that the Aerodrome of Samuel P. Langley was "the first aeroplane capable of sustained free flight with a man." This inaccurate statement, reflecting adversely on the reputation of the Wright brothers, led to the controversy between Orville and the Smithsonian Institution which was to continue until 1942.

**AUGUST 12.** Orville participates in demonstration of new transcontinental telephone service between Dayton and Panama-Pacific Exposition Building in San Francisco.

**AUGUST 26.** Orville, T. Frank Manville, and Frederick Y. Robertson sign agreement for all patent rights of Wrights and an end of all royalty payments under Wright previous patent agreements.

**OCTOBER 15.** Wright Company sold to a syndicate headed by William B. Thompson, Harry Payne Whitney, T. Frank Manville, and other financiers, a primary consideration being Orville's poor state of health and the fact that he wished to devote more time to research.

Orville enters into agreement with Wright Company to serve as consulting engineer at an annual salary of \$25,000.

This agreement is terminated on August 11, 1916.

**NOVEMBER 15.** Pliny W. Williamson, New York lawyer, files suit against Orville, asking \$50,000 as commission for bringing about sale of the Wright Company.

**DECEMBER 11.** Orville has severe pain in his back while driving, is brought home in an ambulance, and is bedridden for approximately eight weeks.

## 1916

**MARCH 28.** Orville named honorary chairman of newly formed Dayton branch of National Security League.

**MAY-JUNE.** Orville and assistants renovate 1903 Wright airplane, preparatory to exhibiting it at the Massachusetts Institute of Technology.

The machine, which had not been assembled since the 1903 flights at Kitty Hawk, had been through two Dayton floods, some of the parts were damaged, and much of the fabric was in poor condition.

**JUNE-NOVEMBER.** Orville builds office and workshop at 15 N. Broadway in Dayton, which was to be his headquarters for the rest of his life. He constructs an aeronautical laboratory equipped with a three-foot wind tunnel.

**JUNE 10.** Orville departs for Boston to attend exercises at the Massachusetts Institute of Technology and is member of group departing from New York on June 11 aboard the S.S. Bunker, which arrived in Boston on June 12.

**JUNE 11, 12, 13.** Wright 1903 airplane sent from Dayton, reassembled by Wright company mechanic James M. H. Jacobs, and exhibited at Massachusetts Institute of Technology, Cambridge, Mass.

**JUNE 12.** Orville honored at testimonial dinner at the Engineer's Club in Boston given by the Dedication Reunion committee of MIT. Prof. Cecil H. Peabody, head of the Department of Naval Architecture presides. Speakers include Alexander Graham Bell, James Means, and Orville. Alan R. Hawley brings a congratulatory message from the Aero Club of America.

**JUNE 14.** Alexander Graham Bell and Orville are guests of honor, in recognition of their great achievements in applied science, at dedicatory exercise for new buildings completed at Massachusetts Institute of Technology in Boston. At National Technology Banquet in Symphony Hall, Orville joins Alexander Graham Bell and Thomas A. Edison in exchange of greetings in demonstration of transcontinental telephone, Edison being at his home in Menlo Park, N.J.

**JUNE 16.** Under the auspices of the Aeronautical Society of Great Britain at the Royal Society of Arts in London, Griffith Brewer delivers the Fourth Wilbur Wright Memorial Lecture, devoted to the life and work of Wilbur Wright.

The lecture was subsequently published in the Society's Aeronautical Journal, July/September issue.

**JULY 11-SEPTEMBER 3.** Orville, Katharine, and Bishop Wright spend vacation on Waubec Island in Georgian Bay, Ontario, Canada.

On September 19 Orville purchased nearby Lambert Island, where in later years he annually spent long summer vacations, usually July to September.

**AUGUST 7.** Wright-Martin Aircraft Corporation, merger of Wright Company and Glenn L. Martin Company, organized with Orville serving as chief consultant engineer.

**OCTOBER 25.** Henry County (Ind.) Historical Society adopts resolution to erect a tablet or marker designating the spot near Millville, six miles east of New Castle, Ind. where Wilbur was born.

**NOVEMBER 17.** Trustees of Oberlin College elect Orville a member of the Advisory Committee for the College of Arts and Sciences on Physics and Astronomy.

**DECEMBER 16.** Wright-Martin Aircraft Corp. acquires Wright patents.

**DECEMBER 23.** Dr. Charles Walcott writes Orville that the National Museum is interested in securing the Wright airplane exhibited at Massachusetts Institute of Technology in June.

## 1917

Orville establishes Wright Aeronautical Laboratory and engages in fundamental scientific research. In 1917 and 1918 he serves as consultant to the government and to private concerns on aeronautical matters in connection with the war.

**JANUARY 1.** Massachusetts Institute of Technology proposes construction of Wright Brothers Memorial Wind Tunnel.

A public announcement of these plans is made on February 24.

**JANUARY 2.** Orville agrees to serve as chairman of a Dayton committee to pass judgment on designs of Dayton inventors and to aid them in their endeavors to promote their inventive projects.

**JANUARY 5.** Orville gives paper entitled "Air Routes to the National Parks" at National Parks Conference held at the National Museum, Washington, D.C., January 2-6. He cites advantages of air travel for reaching national parks and the need for additional landing facilities in or near them.

**FEBRUARY 2.** Orville, in interview declares that in the event of war between the United States and Germany he would offer his services to the government in whatever capacity he might be useful.

**FEBRUARY 7.** Orville and Katharine go to New York to attend Pan-American Aeronautic Exposition.

**FEBRUARY 8-15.** Original Wright 1903 airplane exhibited at Pan-American Aeronautic Exposition held at Grand Central Palace in New York.

**FEBRUARY 9.** Orville is guest of honor at dinner given by Grover C. Loening at Delmonico's in New York, and in one of the few speeches he ever made tells of hardships and encouragement he and his brother experienced in developing a successful airplane.

**FEBRUARY 25-26.** Danish inventor and aviation pioneer Jacob C. H. Ellehammer visits Orville in Dayton.

**MARCH.** Wright Company closes Dayton plant, comprising two building occupying about 4,000 square feet.

**MARCH 10.** Orville acquires Scipio, a St. Bernard, which was to be Wright family pet for many years.

**MARCH 27.** Orville, with Katharine, hears talk at Memorial Hall in Dayton by Jeannette Rankin, first woman elected to Congress.

**APRIL.** In interview with Burton J. Hendrick published in Harper's Magazine, Orville stresses the peacetime uses of the airplane.

**APRIL 3.** Bishop Milton Wright, who had lived with his sons since his retirement in 1905, dies in Dayton, age 88. Services are held on April 5 in Orville's Oakwood home, and burial is in the family plot in Woodland Cemetery. Rev. J. Howe of Huntington, Ind., reads the obituary and gives a brief address on the life and character of Bishop Wright.

**APRIL 11.** Dayton Wright Airplane Co. and Wright Field Co. incorporated, Orville serving as director and consulting engineer for both companies.

**APRIL 25.** Orville commissioned a major in the Aviation Section, Signal Officers Reserve Corps.

**APRIL 30.** Dr. Robert A. Milliken, Ryerson Physical Laboratory, University of Chicago, is guest of Orville on visit to Dayton to address Dayton Engineers' Club.

**MAY 7.** Maj. Benjamin D. Foulois and Capt. E. O. Edgar confer with Orville in Dayton on the training of aviators and on the possibility of establishing a flight training school at Wright Field.

**JUNE 14.** Earlham College, Richmond, Ind., confers master of science degree on Orville.

The degree had been voted four years earlier, but Orville was unable to attend at that time and degree was not granted in absentia.

**JUNE 15.** Orville elected honorary member of Aircraft Manufacturers Association (subsequently Manufacturers Aircraft Association, Inc.).

**JUNE 16.** Orville receives doctor of science degree from the University of Cincinnati.

**JUNE 20.** Council of the Royal Society of Arts, on recommendation of Lord Northcliffe, awards society's Albert Medal to Orville.

**JULY 1.** In interview with Earl N. Findley, published in New York Times, Orville declares that 10,000 airplanes would end the war within 10 weeks.

**JULY 5.** Orville attends wedding of his nephew, Milton Wright, to Ann Margaret Grosvenor in Louisville, Ky.

**JULY 17.** Aerial League of America elects Orville honorary member.

**JULY 23.** Executive committee of the War Work Council of the Y.M.C.A., visiting Dayton and Wilbur Wright Field, breakfasts with Orville in Miami Hotel.

**AUGUST 6.** At citizens' meeting in Dayton's Community Hall, Orville speaks out for nonpartisan city government in opposition to Republican or Democratic control.

**AUGUST 17.** Formation of the Manufacturers Aircraft Association providing for an exchange of licenses among aircraft manufacturers ends patent litigation between Curtiss and Wright interests.

**SEPTEMBER 4.** Board of Governors of National Institute of Inventors elects Orville honorary member.

On July 13, 1918, Orville, questioning the business practices of the institution, requests that his name be removed from honorary membership list.

**SEPTEMBER 24.** Heirs of John J. Montgomery, gliding experimenter killed in 1911 when testing one of his machines, file suit against Wright-Martin Aircraft Corporation, holders of original Wright patents.

**OCTOBER** Orville engaged in experimental work at his laboratory on design of an aerial torpedo, continuing on this project for a year or more.

**OCTOBER 23.** Harvard Aeronautical Society, Cambridge, Mass., elects Orville honorary member.

**OCTOBER 27.** Albert Medal of the Royal Society of Arts of England, "in recognition of the value of the contributions of

Wilbur and Orville Wright to the solution of mechanical flight," presented to Orville in Dayton by Lord Northcliffe.

Lord Northcliffe later was a dinner guest of Orville and Katharine at the Wright home. Charles L. Flint was their guest at lunch.

## 1918

**FEBRUARY 2.** Orville, in his capacity of second vice president of Engineers' Club of Dayton and representing the board of governors, participates in dedicatory exercises for new clubhouse. He accepts building from the building committee on behalf of the club.

**FEBRUARY 3.** Dinner arranged by Mayor Alfred de Lassence, with 200 English-speaking guests attending, commemorates first flight by Wilbur at Pau in 1909.

**MAY.** Orville consulted by Col. Elbert J. Hall on design of propellers to be installed on Bristol aircraft.

**MAY 13.** Orville makes last flight as a pilot, flying an early 1911 model Wright biplane alongside the first De Havilland-4 airplane, built at Moraine City, Ohio. Orville subsequently is a passenger in the DH-4.

**JUNE 6.** In interview in Dayton Orville expresses belief that air attack on New York City is only remotely possible and that attack by planes launched from German submarines is unlikely.

**JUNE 17.** Society of Automotive Engineers, as part of its annual meeting, holds Orville Wright testimonial dinner, with more than 1,200 in attendance, at Triangle Park, Dayton.

**JUNE 17-18.** Wright 1903 airplane exhibited at midsummer national meeting of the Society of Automotive Engineers in Dayton.

**JULY.** For the first time, Orville spends his summer vacation at his summer home on Lambert Island, in Georgian Bay in Canada, which he purchased in 1916.

**JULY 8.** Air Service Institute of the United States elects Orville honorary member.

**OCTOBER 3.** Orville testifies in the U.S. Department of Justice aircraft industry investigation and answers questions asked by Chief Justice Charles Evans Hughes regarding his connection with aircraft production carried out at Dayton during World War I.

**OCTOBER 27.** Special memorial services are held at the grave of Wilbur in Woodland Cemetery in Dayton under the auspices of the Aero Club of America and the Aero Club of Dayton, with Orville and Katharine in attendance. Dr. L. E. Custer lays a wreath of bay leaves on the grave. Mayor Jesse M. Switzer pays tribute to Wilbur, and Judge Charles W. Justin delivers a eulogy.

**DECEMBER 3.** Orville attends annual meeting of Society of Automotive Engineers in New York, is elected an honorary member of the society and is honored at a dinner at the Engineers' Club of New York.

**DECEMBER 11.** In statement submitted to Manufacturers Aircraft Association, Orville declares: "A commercial demand

will be quickly created when safe landing places for the present high speed machines are provided at frequent intervals or when a type of machine is developed which can safely land on ordinary ground. I believe that the failure of the aeroplane for support and commercial uses up to this time has been entirely due to the lack of facilities for safe landing at any and all times."

This statement is released December 20.

**DECEMBER 20.** Orville attends testimonial dinner honoring his friend Col. Edward A. Deeds, president of the National Cash Register Company in Dayton, at the Army and Navy Club, Washington, D.C.

**DECEMBER 22.** First stone of a monument to be erected by Aéro-Club de France to commemorate the historic airplane flights of Wilbur laid at Le Mans. Brig. Gen. Benjamin D. Foulois and Col. Charles DeF. Chandler are present as representatives of the American Expeditionary Forces in France.

Speeches lauding the achievements of the Wright brothers are made by René Buon, the Mayor of Le Mans; Senator Paul d'Estournelles de Constant, president of the Wright Committee; the American ambassador, William B. Sharp; Henry Simon Minister of the Colonies, representing the French government; Paul Painlevé, former French premier, and one of Wilbur's first passengers in a flight of 1908; and by Baron A. d'Aubigny, deputy of Le Mans. Louis D. Beaumont presents a bronze wreath on behalf of the city of Dayton. Ambassador Sharp, on behalf of the Aero Club of America, presents a commemorative bronze plaque.

## 1919

**JANUARY 13.** Orville appointed to serve on Committee of Technical Section, Division of Military Aeronautics, War Department to participate in test of Italian Caproni biplane.

**FEBRUARY.** Orville contributes article entitled "Sporting Future of the Airplane" to U.S. Air Services, declaring that reducing the landing speed of the airplane is an essential factor.

**FEBRUARY 3.** Orville accepts appointment to serve as a consulting engineer on airplane design in the Technical Division of the Air Service, to serve without remuneration.

**FEBRUARY 7.** Ind. State Representative Luther F. Symons introduces House Bill 326, providing for the erection of a memorial to Wilbur Wright and appropriating \$2,000 to purchase the birthplace of Wilbur in Liberty Township, Henry County, Ind. The bill passes the House February 28 and the Senate March 10 but is not signed and enacted into law.

**FEBRUARY 22.** Orville is among leading Dayton business and professional men attending dinner honoring his friend Col. Edward A. Deeds, president of the National Cash Register Company, at Dayton City Club.

**MARCH 1-15.** Wright 1903 airplane exhibited at the Aeronautical Exposition, New York.

**MAY 7.** At a testimonial dinner given for Capt. Eddie Rickenbacker by the Aero Club of Dayton, Orville meets the World War I ace for the first time.

**MAY 22.** Orville is host to the Arctic explorer Vilhjalmur Stefansson and entertains at a luncheon in his honor at the Dayton Engineers' Club.

**JUNE 3.** Dr. Jan B. Claverie visits Dayton and presents Orville with a duplicate of the bronze plaque placed on the Wilbur Wright Memorial at Le Mans on September 22, a token of esteem from Louis D. Beaumont.

**JUNE 18.** Yale University confers honorary master of arts degree on Orville, "In recognition of the triumphant consummation of a work which a long line of great men from Leonardo da Vinci have sought to effect." He is the guest of Prof. Joseph W. Roe in New Haven on June 17 and 18.

Miss Ivonette Wright, niece of Orville, marries Harold S. Miller in ceremony at Orville's home in Dayton.

**JULY-AUGUST.** Orville and a group of World War I coworkers take a four-week trip to the West Coast, Orville's first trip to the West. The party consists of Cols. Edward A. Deeds, Sidney D. Waldon, Milton F. Davis, and Edwin S. George, Lt. Harold H. Emmons, Gordon S. Rentschler, Charles Deeds, Joe Butts, H. Marchant, George Spencer, and Dana Mayo.

Henry Ford was originally scheduled to accompany the group but was prevented from doing so by involvement in a legal suit. Stops were made at Denver, Salt Lake City, Reno, San Francisco, and Los Angeles.

**SEPTEMBER 27.** Orville accepts honorary membership in American Flying Club.

**NOVEMBER 8.** Aero Club of Texas confers honorary membership, voted some months earlier, on Orville.

**DECEMBER 16.** Orville attends city of Dayton luncheon at Miami Hotel given in honor of Gen. John J. Pershing on his visit to the city.

## 1920

**JANUARY 13.** Orville submits identical depositions in Dayton in behalf of the defendants in two suits by Regina Cleary Montgomery v. The United States and in Regina Cleary Montgomery et al v. Wright-Martin Aircraft Corporation. The chronological evolution of the Wright control system is told at great length by Orville in the deposition, one of the best published accounts on this subject.

Orville's depositions of January 13, 1920, and February 2, 1921, were subsequently edited by Fred C. Kelly and published with the title *How We Invented the Aeroplane* (New York, David McKay, 1953).

**JANUARY 20.** John Fritz Medal Board of Award, in annual meeting in New York, chooses Orville as the medalist for the year 1920.

**JANUARY 26.** Orville informed of election as life member of Ohio State Archaeological and Historical Society.

**JANUARY 29.** Orville appointed by President Wilson as civilian member of the National Advisory Committee for Aeronautics.

He served for 28 years with quite regular attendance at annual and semi-annual meetings in Washington until his death in 1948.

**APRIL 14.** Aero Club of Dayton elects Orville honorary member.

**APRIL 28.** U.S.S. Wright, aircraft tender honoring Wilbur, launched at Philadelphia with Mrs. Roland M. Comfort of Washington, D.C., a longtime friend of Orville, as sponsor.

**MAY 7.** Orville presented with the John Fritz Medal, for noteworthy work in the development of the airplane, in auditorium of Engineering Societies building in New York City.

**MAY 23.** Reuchlin Wright, brother of Wilbur and Orville, dies in Kansas City, Mo. Illness prevents Orville from attending funeral services.

**JULY 17.** Wilbur Wright monument at Le Mans, France, dedicated. The work of sculptor Paul Landowski and architect Paul Bigot, the 40-foot-high shaft and sculpture were the gift of Commodore Louis D. Beaumont of Dayton. Tributes to Wilbur are delivered by former American Ambassador to France Myron T. Herrick, Lasare Weiller, and others.

**NOVEMBER.** Orville, after suffering severe pains, visits Mayo Clinic in Rochester, Minn., for treatment of a sciatic leg ailment, a result of his airplane accident at Fort Myer, Va., in September 1908. X-ray examination at this time disclose that apparently in the 1908 accident there had been three fractures in the hip bones, besides a dislocation of one of them, which had previously been unknown to him. Doctors prescribe treatment which considerably alleviated the pain.

## 1921

Orville becomes member of American Federation of Arts.

Orville elected honorary member of National Association of Audubon Societies.

**JANUARY.** Wright 1903 airplane set up at South Field, Dayton, for purposes of obtaining testimony in the Regina Cleary Montgomery et al v. Wright-Martin Aircraft Corporation suit.

**FEBRUARY 2.** Orville submits identical depositions in behalf of the defendants in the suits brought by Regina Cleary Montgomery et al. V. Wright-Martin Aircraft Corporation.

**MARCH 25.** Milton Wright Memorial Home (United Brethren Church) Chambersburg, Pa., honoring Bishop Milton Wright, is incorporated and commences operations on April 1.

**APRIL 25.** Orville attends breakfast at the home of Col. Edward A. Deeds honoring the new Chinese minister to the United States, Dr. Alfred Sao-ke Sze, who was in Dayton in the interest of the China famine fund.

**APRIL 28.** Aircraft tender U.S.S. Wright launched at Hog Island, Va.

**MAY 9.** Carl Akeley, noted explorer, and Griffith Brewer are guests of Katharine and Orville at Engineers' Club in Dayton.

**MAY 19.** Orville accepts membership in Dayton Chamber of Commerce.

**OCTOBER 20.** Griffith Brewer delivers lecture before the Royal Aeronautical Society in London supporting Orville's claims that the original Langley machine was not capable of sustained free flight and was not successfully flown at Hammondsport, N.Y., on June 2, 1914.

The lecture is subsequently published in U.S. Air Services, October 1921, and in The Aeronautical Journal, December 1921.

**DECEMBER 16.** Aircraft tender U.S.S. Wright commissioned in New York, first naval vessel constructed as a seaplane tender. When this ship was reclassified as a miscellaneous auxiliary in 1944, the name was changed to the U.S.S. San Clements.

**DECEMBER 18.** In first statement since the end of the war issued from the office for the Aeronautical Chamber of Commerce of America, Orville tells of the problems overcome before the first successful flight in 1903 and states that "Flying seems so easy today that one naturally wonders at the long delay in its accomplishment."

**DECEMBER 21.** Orville member of reception committee meeting Rep. Joseph W. Fordney of Michigan, author of tariff reform bill, who had come to Dayton to speak at a Chamber of Commerce dinner.

**DECEMBER 29.** Orville elected member of the Aeronautical Chamber of Commerce of America, Inc.

He continued this membership and on May 15, 1944, was elected to Honorary Life Membership.

## 1922

**JANUARY 26.** Navy Bureau of Aeronautics publishes its Report No. 184, "Air Force and Moment for Dayton-Wright Split-Flap Aerofoil." The split-flap was developed by Orville in cooperation with James M. H. Jacobs, an employee of the Dayton-Wright Airplane Company in Dayton.

The report concludes that the split flap is of no value. Ten years later the Navy was one of the first to use it.

**FEBRUARY.** Orville states in Popular Science Monthly symposium devoted to the question "What is the most pressing scientific achievement now required in the field of your special interest?" that low-speed landing is first need of aviation.

**FEBRUARY 6.** Orville attends fourth annual banquet of Engineers' Club in Dayton.

**FEBRUARY 16.** In telegram to New York Times Orville reports his observation of a rainmaking experiment conducted

over Dayton in which clouds were sprayed with electrified sand particles from an airplane.

**MAY 10.** Gyro Club meeting in Dayton Engineers' Club passes resolution recommending change in name of Third Street to Wright Avenue in memory of Wilbur Wright and as a testimonial to Orville Wright.

**MAY 25.** Dayton Mayor Frank B. Hale names Orville to serve on commission to plan an appropriate memorial to John H. Patterson, founder of the National Cash Register Company in Dayton.

**JULY 6.** Orville as a former recipient attends ceremony in Engineering Societies Building auditorium in New York at which Guglielmo Marconi receives the John Fritz Medal for 1922. In the evening, he attends a dinner given in Marconi's honor at the Engineers' Club of New York.

**JULY 13.** In poll conducted by New York Times Columbia University professor Michael I. Pupin names Orville one of 12 great Americans.

**SEPTEMBER 26.** Wright Aeronautical Corporation new flying boat Wilbur Wright, recently purchased from Grover Loening, is christened by Katharine Wright in ceremony in New York, witnessed by Orville. Following the christening, Orville, Katharine, Vilhjalmur Stefansson, explorer, and the poet Percy Mackaye are passengers in an initial flight over the Hudson River in the flying boat piloted by Frederick H. Becker. After the flight Orville and Katharine are among 40 luncheon guests at the Columbia Yacht Club.

**OCTOBER 4.** Orville attends a dinner at Dayton Engineers' Club honoring Julius H. Barnes, president of the U.S. Chamber of Commerce, who was in Dayton as the guest of the Dayton Chamber of Commerce.

**OCTOBER 7-14.** Orville attends Pulitzer air races in Detroit. On October 12 he views new military aircraft and engines at Selfridge Field, Mich.

**OCTOBER 16.** In letter to Charles J. Glidden, editor of the Aeronautical Digest, Katharine writes: "I did no pioneer work in connection with the invention of the aeroplane. That pretty story was the outcome of someone's imagination. I had the greatest interest in my brothers' work always but that was all."

**OCTOBER 26.** Henry County Historical Society (Ind.) approves project of Phi Delta Kappa fraternity to erect a tablet to the memory of Wilbur in Memorial Park in New Castle, Ind.

**DECEMBER.** U.S. Air Services publishes article by Orville entitled "Possibilities of Soaring Flight" presenting view that the importance of soaring flight was being exaggerated as a result of the experiments in Europe in 1922, and that the airplane would remain unrivaled as a means of transportation.

**DECEMBER 2.** Orville is named by Robert Elder, president of Dayton Chamber of Commerce, as member of committee of distinguished citizens to greet former French Premier Georges Clemenceau on his arrival in Dayton on December 3.

**DECEMBER 18.** National Aeronautics Association appoints Orville as chairman of a Soaring Flight Committee. The committee was to make a thorough study of glider contests and promote such contests in the United States.

## 1923

**MARCH 20.** Orville, as chairman of the Soaring Flight Committee of the National Aeronautics Associate, sends circular letter appealing for support of the association, which had been organized in 1922.

**APRIL 2.** Orville is a member of reception committee greeting Brig. Gen. Herbert N. Lord, director of the budget, and Mrs. Lord on their arrival in Dayton.

**APRIL 15.** Memorial tablet erected by Phi Delta Kappa fraternity honoring Wilbur Wright unveiled at Henry County Memorial Park, New Castle, Ind., in the presence of Orville and Katharine. Mr. and Mrs. Lorin Wright also are present.

The marker was located on the spot where the farmhouse of Bishop Milton Wright originally stood. The inscription reads, "Wilbur Wright—aeronaut and pioneer of heavier-than-air aviation." Judge Raymond Springer of Connersville, Ind., eulogizes the life of Wilbur in the principal address. The occasion was the first visit of Katharine and Orville to New Castle.

**APRIL 16–17.** Orville is official observer at speed test by Lts. John A. Macready and Oakley G. Kelly conducted at McCook Field in Dayton, in which Macready and Kelly established world records for endurance, distance, and speed.

**MAY 22.** Basic Wright patents held by Wright Aeronautical Corporation expire.

**JUNE 1.** Manufacture of airplanes and experimental aeronautical work at Dayton Wright Company discontinued.

**JUNE 2.** Orville's niece, Leontine Wright, is married to John Jameson in Orville's home in Dayton.

**JUNE 14–18.** Orville is participant in cruise, organized by Detroit Board of Commerce, from Detroit northward into the Great Lakes.

**JULY 4.** Orville, accompanied by sister Katharine, visits Indianapolis to witness national balloon competition.

**OCTOBER 1–3.** Orville and Katharine attend International Air Races and Aeronautical Exhibition at St. Louis, Mo. They attend annual aeronautic banquet, Third National Aero Congress, at Hotel Statler on October 1. On October 2 Orville is guest at luncheon meeting of the Advertising Club of St. Louis.

**DECEMBER 7.** Orville is chief observer and witness of attempted world speed record flight by Lt. John A. Macready at McCooks Field in Dayton.

**DECEMBER 16.** Orville prepares message dealing with 20 years' progress in aviation for delivery over radio station WLW in Cincinnati. It is read by Dr. D. Frank Garland, of the National Cash Register Company in Dayton.

**DECEMBER 17.** The 20th anniversary of the first successful powered heavier-than-air flight at Kitty Hawk by the Wright brothers is observed in impressive ceremonies at Dayton. Orville receives congratulatory messages from President Calvin Coolidge, Secretary of War John W. Weeks, and Assistant Secretary of the Navy Theodore Roosevelt, Jr. A bronze plaque is presented to Orville by Frederick Patterson, head of the National Aeronautic Association. Foreign representatives coming to Dayton to pay homage to Orville include Wing Commander Mario Calderara, air attaché at the Italian embassy and the first officer in the world to fly, Capt. Georges Thenault, French air attaché, and Commander Harold A. Brown, British naval attaché. Also among the guests are Vilhjalmur Stefansson, explorer, and Carl E. Akeley, big game hunter, close friends of Orville. The visiting dignitaries are guests of Orville and Katharine at a luncheon in their home. Later the visitors and Orville and Katharine are dinner guests of Frederick Patterson before the commencement of the evening ceremonies, which are presided over by former Governor of Ohio James M. Cox.

**DECEMBER 18.** Board of Directors of Aviation Athletic Club of Cleveland elects Orville honorary member.

## 1924

**MARCH 10.** Orville is named an officer of the Legion of Honor and is to receive Cross of Officer of the Legion. Katharine is appointed an officer of Instruction Publique.

Notification is made on April 10 by Gen. George Dumont, French military attaché in Washington. Presentation of decoration is by General Dumont in Washington on April 24.

**APRIL.** University of Dayton Exponent publishes interview with Orville by Carl J. Crane in February. Orville says, "The usefulness of the airplane lies in its speed and facility of locomotion, and not so much in its great size and capacity to carry tremendous loads, for we know today that the efficiency of the airplane decreases as this size increases. I have the most optimistic views, however, that the airplane will find in the near future its real application in the economics of the universe much the same as the steamship and automobile found their value and worthy application."

**MAY 23.** Dayton Section of the Society of Automotive Engineers institutes annual award of a medal to be known as "Wright Brothers Medal for Meritorious Achievement in Aeronautics" to be awarded for the presentation of new development in the form of engineering papers.

The papers submitted did not meet the requirements stipulated and no award of the medal was made.

**JUNE 3.** Orville is elected president of the Dayton Engineers' Club.

**JUNE 16.** Orville receives honorary doctor of engineering degree from University of Michigan.

**JULY.** Orville is elected honorary member of Detroit Aviation Society.

**JULY 1.** Orville is appointed chairman of the Contest Committee of the National Aeronautic Association at a meeting of the Executive Committee of the association in Dayton.

He was to continue to serve in this capacity for the years 1924, 1925, 1926, and 1927.

**AUGUST 12.** Orville, with James M. H. Jacobs, is granted patent No. 1,504,663 for a split flap later used by the U.S. Navy.

The flap was developed in 1920 and the patent applied for May 31, 1921.

**SEPTEMBER 5.** Dayton Chapter of National Aeronautic Association votes to start permanent restoration of original Wright brothers hangar so that the restoration may be completed in time for the International Air Races to be held in Dayton, October 2, 3, and 4.

**OCTOBER 2, 3, 4.** Wright 1903 airplane and engine exhibited at International Air Races in Dayton.

This was the last time the plane was exhibited before shipment to England in February 1928. Orville attends races and serves as chairman of the timing committee for the Pulitzer Race.

**OCTOBER 3.** Lt. John Macready circles the flying field in a 15-minute flight in a 1910 Wright model B biplane at a speed of about 45 miles an hour, with Orville and Katharine witnessing the flight from the grandstand. Orville attends the second annual banquet of the National Aeronautic Association.

Orville is among those greeting and congratulating Lts. Smith, Nelson, Wade, Harding, Ogden, and Arnold on arrival in Dayton on return from their round-the-world flight.

**OCTOBER 3-5.** Commander and Mrs. Mario Calderara, Col. Frank S. Lahm, and Col. Frank P. Lahm are house guests of Orville and Katharine at their Hawthorn Hill home.

**OCTOBER 23-25.** Orville and Katharine are guests of Frank P. Lahm at Akron Club in Akron, Ohio.

**NOVEMBER 1.** Orville accepts invitation to become a vice president of a proposed National Museum of Engineering and Industry, which is undertaking to raise a national endowment of \$10,000,000 for a building to be erected on the mall in Washington that would house an Inventors and Engineers Hall of Fame.

**NOVEMBER 14.** Orville attends dinner given by the Canton Chapter, National Aeronautic Association, in honor of Frank S. Lahm.

**DECEMBER 13.** Orville attends annual banquet of the Ind. Society of Chicago.

**DECEMBER 16.** In brief message to London Daily Mail Orville recalls some achievements of the airplane since pioneer days.

**DECEMBER 17.** Board of Governors of National Aeronautic Association elects Wilbur, Orville, and Katharine honorary members of the Association, the first such memberships conferred to this date.

## 1925

**JANUARY 20.** Orville issued patent No. 1,523,989 for a mechanical toy consisting of a device by which an object, such as a doll, is thrown through the air and caused to be engaged and to be supported by a swinging bar.

The patent application was filed November 10, 1923. The toy was produced and sold by the Miami Wood Specialty Company in Dayton, whose president was Lorin Wright.

**FEBRUARY 16-17.** Hart O. Berg, former European business associate of Wrights, visits Orville in Dayton.

**MARCH 2.** Maj. Roy Brown, Wright flying school student in 1915 and World War I ace, visits Orville at his home, and the two reminisce on the state of aviation in 1915.

**APRIL 8.** City of Philadelphia awards its John Scott medal to Orville "for his inventions in the development of Flying Machines."

Orville was unable to attend the presentation ceremonies held in Weightman Hall, University of Pennsylvania, on June 17.

**APRIL 30.** In statement given to Dayton News and Dayton Journal for release, Orville confirms reports that he will give the original Wright airplane to the Science Museum at South Kensington, London.

**MAY 2.** Orville issues statement contending that the Smithsonian Institution label on the Langley plane describing it as the first capable of flight is incorrect.

**MAY 4.** Secretary of the Smithsonian Institution Dr. Charles D. Walcott releases statement reviewing the trials of the Langley Aerodrome at Hammondsport, N.Y., in May and June 1914 and reaffirming the correctness of the Smithsonian label describing the Langley flying machine as "The first man-carrying aeroplane in the history of the world capable of sustained free flight."

**MAY 14.** In a letter to Chief Justice William Howard Taft as Chancellor of the Smithsonian Institution, Orville asks for an impartial investigation of his charges against Dr. Charles D. Walcott of the Smithsonian Institution.

**MAY 15.** Chief Justice Taft, replying to Orville's letter of May 14, states that he can take no active part in the Wright controversy with the Smithsonian Institution.

**MAY 29.** Grover C. Loening announces that Orville is agreeable to keeping original Wright airplane in the United States provided that the Smithsonian Institution truthfully label the Langley airplane, that the Institution publish both sides of the Langley controversy in its annual report, and that the Wright airplane be labeled as the first man-carrying air machine in the world.

**JUNE 10.** Dr. Joseph S. Ames, Johns Hopkins University, and Rear Adm. David W. Taylor, U.S. Navy, submit to Dr. Charles D. Walcott a suggestion for a revised label on the Langley airplane.

The suggestion was being made in an attempt to arrive at a compromise in the controversy between Orville and the Smithsonian Institution.

**JUNE 12.** Orville rejects offer of Charles M. Manly to conduct further tests with the original Langley Aerodrome.

**JUNE 16.** Arthur C. Johnson, president of the Ohio Archeological and Historical Society, calls on Orville in Dayton and invites him to deposit original Wright airplane in society's building in Columbus.

**AUGUST 31.** Wilbur Wright Field and new Army Air Service Field renamed Wright Field, breaking an Army precedent that no flying field was to be named in honor of any living man.

**SEPTEMBER 24.** Orville designated as chairman of advisory committee for new Guggenheim School of Aeronautics, New York University.

**OCTOBER 7.** Orville attends aeronautic dinner of the Society of Automotive Engineers at Hotel Astor in New York City.

**OCTOBER 8-13.** Orville attends New York Air Races, Mitchell Field, Long Island.

**OCTOBER 9.** Orville attends annual banquet of National Aeronautic Association at Hotel Pennsylvania in New York City.

**OCTOBER 12.** Orville testifies in Washington before the President's Aircraft Board. He urges the development of commercial aviation as a means of building up an adequate air reserve and advocates, as a step toward the encouragement of commercial flying, the establishment by municipalities of airports and landing facilities.

Katharine and Orville are luncheon guests of President Coolidge at the White House.

**OCTOBER 23.** Building in Dayton housing Wright laboratory is sold.

The operation of the laboratory was not affected.

**OCTOBER 24.** Orville witnesses Schneider Cup airplane speed races at Bay Shore near Baltimore, Md.

**OCTOBER 28.** Orville gives deposition for defendant in Dayton in George Francis Myers v. The United States patent suit.

**NOVEMBER 9.** Orville is guest of honor at dinner sponsored by the Dayton Chapter of the National Aeronautic Association. Comdr. John P. Rodgers, trained at the Wright Flying School in Dayton in 1911, is the principal speaker.

**NOVEMBER 28.** Orville elected honorary member of Berkeley Aviation Club, Martinsburg, W.Va.

**DECEMBER 7.** Orville participates in meeting of National Advisory Committee for Aeronautics in Dayton. He tours McCook and Wright Fields with members.

**DECEMBER 12.** Orville is among guests of honor at meeting of the Gridiron Club at Willard Hotel in Washington. President Calvin Coolidge, Vice President Charles G. Dawes,

and Col. William Mitchell are among government officials attending.

**DECEMBER 17.** Dayton Board of Education passes resolution to name a projected new school "Wilbur Wright Junior High and Elementary School."

**DECEMBER 24.** Announcement is made in Paris of the Wilbur Wright cup, a new trophy for speed aviation, with competition to be held in France. The new trophy would replace the James Gordon Bennett and Commodore Louis D. Beaumont Cups.

## 1926

**1926-1927.** Orville serves as governor at large of the National Aeronautic Association.

**JANUARY 18.** Orville is one of 10 leaders in aviation, engineering, law, and finance named as trustees of the Daniel Guggenheim Fund for the Promotion of Aeronautics, Inc.

**JANUARY 26.** Orville elected a member of the Daniel Guggenheim Fund for the Promotion of Aeronautics at its organizational meeting.

On December 7, 1926, he was elected a member of its board of directors and served in that capacity until the dissolution of the fund in March 1930.

**JANUARY 31.** In statement submitted to Dayton Journal, Orville declares: "The expenditure of \$10,000,000 in aeronautical research and experimentation before the last war would have saved hundreds of millions that had to be spent to accomplish the same result after the war had begun. Economy demands that we keep abreast of the world in aeronautical research. While we may be able to cut down the amount of actual building, we must keep to the front in knowledge of how and what to build if war should come."

**FEBRUARY 6.** At 12th anniversary dinner of Engineers' Club of Dayton, honorary life membership is conferred on Orville.

**FEBRUARY 20.** Orville is cited as one of the four outstanding men of the 20th century by Marion L. Burton, President of the University of Michigan.

**FEBRUARY 24.** In letter Comdr. Richard E. Byrd consults Orville in connection with Byrd's forthcoming expedition to Antarctica.

**MARCH 13.** Orville is official observer at altitude record attempt by Lt. John A. Macready at McCook Field in Dayton.

**MARCH 19.** Orville, as chairman of contest committee of National Aerouatic Association, presents Collier Trophy for 1925 to Dr. S. Albert Reed, aeronautical engineer, in ceremony at Bolling Field, Washington, D.C.

**APRIL 13.** Orville and Katharine are present at ground-breaking ceremonies for Wright Air Field in Dayton. Frederick B. Patterson, president of the National Cash Register Company, past president of the National Aeronautic

Association, and chairman of the Dayton Air Service Committee, pulls the lever on the steam shovel that lifts the first dirt for the building excavations.

**APRIL 15.** Orville, together with Comdr. Richard E. Byrd, Comdr. John P. Rodgers, and Col. William E. Mitchell, is honored as airman at Gridiron Club dinner at Willard Hotel in Washington, D.C.

**APRIL 29.** In interview Orville declares: "The development of the airplane has been far faster than I ever dreamed when my brother and I began experimenting with heavier-than-air craft years ago. Especially in the past few years, since the war, has air power been developing amazingly."

"In fact I fear that it is growing too fast for its own good. I know this may sound pessimistic, for the common custom is to cheer regardless of the facts. However, I have watched the history of the airplane since its beginning, and I fear it is growing faster than its public."

**APRIL 29-30.** Orville attends National Elimination Balloon and Airplane Races at Little Rock, Ark.

**JUNE 1-2.** Orville is guest of Harry F. Guggenheim at his estate at Port Washington, Long Island, and attends preliminary conference meeting of the Daniel Guggenheim Fund for the Promotion of Aeronautics, Inc. on June 1 and its first regular meeting on June 2.

**JULY 27.** Preliminary plans announced for the construction of a new hotel in Dayton to be named Wilbur Wright.

**AUGUST 21.** Cornerstone for Wilbur Wright Elementary and Junior High School laid by Lorin Wright, city commissioner and brother of Wilbur and Orville, in ceremonies at Dayton.

Katharine and Orville were at Orville's summer home in Canada and did not attend. Mrs. Howard H. Beck, Wright family friend, compiled a biography of Wilbur which was placed in the cornerstone.

**SEPTEMBER 8.** Orville elected governor-at-large of National Aeronautic Association at annual meeting in Philadelphia, being reelected and continued in office in subsequent years.

**SEPTEMBER 19.** Orville recovers valuable stickpin presented to him by Crown Prince Friedrich Wilhelm in Germany in 1909, which had been stolen.

**OCTOBER 4.** Prof. Theodor von Kármán, of the University of Aachen, on a tour of the United States on behalf of Daniel Guggenheim Fund for the Promotion of Aeronautics, Inc., is luncheon guest of Orville in Dayton.

**NOVEMBER 19.** Orville meets with Comdr. Richard E. Byrd, American naval officer and polar explorer, who was in Dayton to deliver a lecture.

**NOVEMBER 20.** Katharine Wright married to Henry J. Haskell, associate editor of the Kansas City Star. The ceremony is performed at Oberlin College, Oberlin, Ohio, by the college president, Henry Churchill King.

**DECEMBER.** Preparatory to sending Wright 1903 airplane to England, Orville commences recovering the plane with new cloth, since the original clot was badly worn from having been handled so much in setting up the machine at various exhibitions. He is assisted in sewing by Miss Mabel Beck, his secretary, and in woodwork and assembly by James Jacobs.

**DECEMBER 7.** Orville elected to Board of Directors of Daniel Guggenheim Fund for the Promotion of Aeronautics, Inc.

**DECEMBER 17.** Senator Hiram Bingham, of Connecticut, introduces S. 4876, providing for the erection of a monument on Kill Devil Hill, at Kitty Hawk, N.C., commemorative of the first successful attempt in history at power-driven airplane flight.

Representative Lindsay Warren, of North Carolina, introduces H.R. 15348, authorizing an appropriation of \$50,000 for the erection of a memorial at Kitty Hawk to commemorate the first successful airplane flight by Wilbur and Orville Wright. The bill died in committee.

**DECEMBER 19.** Orville named chairman of committee of National Aeronautic Association which was to award the 1926 Collier Trophy.

Orville attends christening of a new light airplane, "Twin-60," developed by the Johnson Aircraft Corporation in Dayton.

## 1927

**FEBRUARY 15.** Orville attends 13th annual dinner meeting of Engineers' Club of Dayton.

**MARCH.** Wright 1903 airplane renovation completed and machine assembled at Orville's laboratory, remaining there until packed and crated in January 1928 for shipment to England.

**MARCH 2.** President Calvin Coolidge signs act providing for the erection of a monument on Kill Devil Hill, at Kitty Hawk, N.C., to commemorate the first successful powered airplane flight by Orville Wright on December 17, 1903.

**MARCH 16.** Orville gives early type of Wright aviation engine to Royal Scottish Museum, Edinburgh, for permanent exhibition.

**APRIL 30.** Harry Guggenheim, president of the Daniel Guggenheim Fund for the Promotion of Aeronautics, appoints Orville chairman of a committee to award \$150,000 in prizes in a "safe aircraft competition."

**MAY 2.** Western Society of Engineers, Chicago, names Orville to receive Washington Award.

**MAY 3.** Dr. Michael I. Pupin, Columbia University professor, scientist, and inventor, in Dayton to deliver lecture entitled "The Message of Science" to Engineers' Club of Dayton, is guest at home of Orville.

**MAY 16.** Orville named Honor Scout by National Court of Honor of the Boy Scouts of America.

**JUNE 1.** Orville presented with Washington Award by the Western Society of Engineers "for fundamental scientific research and resultant successful airplane flight" at society's

annual meeting and dinner at the Palmer House, Chicago. Presentation is made by Paul Westburg, Chicago engineer.

**JUNE 8.** Orville participates in ceremony in which a copper box containing complete historical data on the life and works of John H. Patterson, president of National Cash Register Company, is sealed in the base of the memorial being constructed in his honor.

**JUNE 17.** Orville, on steps of his laboratory, is among Daytonians who watch the Spirit of St. Louis, piloted by Charles Lindbergh with accompanying escort of planes, fly over Dayton en route to St. Louis.

**JUNE 22.** Orville is host to Charles A. Lindbergh at his home on Hawthorn Hill in Dayton following receptions for Lindbergh in Washington, New York, and St. Louis. The visit was in response to an invitation extended by Orville on June 10 through Maj. Albert Bond Lambert, one of a group which had backed Lindbergh on his flight to Paris. At dinner at his home Orville is host to Lindbergh, Harry H. Knight, Harold M. Bixby, Gen. William E. Gilmore, and Maj. Thomas G. Lanphier, as well as Capt. St. Clair Street, who had flown with Lindbergh to Dayton. Early the following morning Orville, in company of General Gilmore, takes Lindbergh to his laboratory to show him the Wright 1903 airplane.

**JUNE 23.** Oscar E. Cesare, artist, comes to Dayton to make a drawing of Orville.

An article about this portrait by Cesare subsequently appeared in the New York Times, July 17, 1927.

**JULY 23.** Orville named chairman of special committee of the American Playground and Recreation Association appointed to plan a nationwide model airplane contest.

**AUGUST 5.** On visit to Dayton Lindbergh places wreath on grave of Wilbur in Woodland Cemetery.

**AUGUST 10.** Early Wright engine, gift of Orville to the Royal Scottish Museum in Edinburgh, is placed on exhibit in its Machinery Hall.

**AUGUST 16.** Kill Devil Hills Memorial Association (now Kill Devil Hills Memorial Society) formed in Elizabeth City, N.C., for purpose of erecting monument commemorating the first flights of the Wrights at Kitty Hawk, N.C. Its objectives are "to preserve and foster the memory of the historic achievements of Orville and Wilbur Wright, to sponsor, cosponsor, or otherwise arrange an appropriate observance each year at the site and on the anniversary date of man's first successful powered flight."

**OCTOBER 12.** Wright Field, Dayton, Ohio, dedicated to Wilbur and Orville Wright with impressive ceremonies and flying program, with Secretary of War Dwight F. Davis, Assistant Secretary of War F. Trubee Davison, and Gen. Mason M. Patrick, head of the U.S. Army Air Corps, in attendance.

**OCTOBER 19.** Orville attends dinner in Washington given by Assistant Secretary of War F. Trubee Davison in honor of Sir Phillip Sasson, British Under Secretary of Air.

**NOVEMBER 2-4.** Wilbur Wright Junior High School dedicated in Dayton. Orville and brother Lorin are present at the formal dedication exercises held at the school on November 4. Dedicatory address is by Dr. E. E. Lewis, Department of School Administration, Ohio State University.

**NOVEMBER 14.** Orville attends National Geographic Society's ceremonies in Washington in which society's Hubbard Gold Medal is presented to Lindbergh.

## 1928

**JANUARY 31.** Orville ships the Wright 1903 airplane to the Science Museum, London, for exhibit there for a period of five years. The plane arrived in England February 21 aboard the Minnewaska. The plane was sent by him "as a means of self-protection in overcoming propaganda in disparagement of us broadcast by the Smithsonian at Government expense."

**FEBRUARY 8.** Orville is guest of honor at annual dinner and meeting of Miami Valley Traffic Club in Dayton.

**FEBRUARY 12.** Emil Ludwig designates Orville as one of four greatest living Americans. Orville was chosen because he and Wilbur created by methods "so original and bold that they might have come from the pages of Homer. The sublime quality in Wright is, after all, not lightning flash of genius; it is the immensity of perseverance, the sure faith in reaching the sought for goal, and the courage to rise again and again."

**FEBRUARY 21.** Sefton Brancker, of the British Air Ministry, informs Orville, in letter, of the arrival in England of the 1903 Wright airplane, shipped in January.

**FEBRUARY 29.** Representative John J. McSwain, of South Carolina, introduces H.J. Res. 224, to ascertain which was the first heavier-than-air flying machine and providing for a commission of five persons to hear evidence on this question. The resolution passed the House May 16.

**MARCH.** In article in U.S. Air Services Orville gives his reasons for sending the 1903 Wright airplane to a British museum. He says he is doing so "because of the hostile and unfair attitude shown towards us by the officials of the Smithsonian Institution."

**MARCH 3.** Smithsonian Institution offers to change the label on the Langley machine if Orville will state that this is being done as a friendly gesture and agrees that it will give proper honor to the Wright 1903 airplane if deposited there. Orville does not accept this offer.

**MARCH 4.** In statement to press Orville says changing of label on the Langley Aerodrome would not correct other false statements previously made by the Smithsonian Institution. He asks for an investigation by an impartial body of the charges that he has made against the conduct of the Smithsonian Institution.

**MARCH 15.** Board of Regents of Smithsonian Institution passes resolution declaring that "to the Wright brothers belongs the

credit of making the first successful flight with a power-propelled heavier-than-air machine carrying a man."

**MARCH 20.** Wright 1903 airplane installed and exhibited for the first time in England when new galleries of the Science Museum, South Kensington, London, are opened in ceremony attended by King George V and Queen Mary.

During the tour that followed, the King and Queen showed special interest in the Wright airplane.

**MARCH 23.** War Department Appropriations Act approved on this date includes an appropriation of \$25,000 to commence Wright Memorial at Kitty Hawk, N.C.

**APRIL 27.** Representative Roy G. Fitzgerald, of Ohio, and Charles G. Abbot, secretary of the Smithsonian Institution, testify in House Committee on Military Affairs hearing on the first heavier-than-air flying machine, discussing points at issue and introducing into the record pertinent statements and documents.

**MAY 2.** Shaft, carved by F.A. Berry, marking the spot where Wilbur Wright began the assembly of the first glider, unveiled by the citizens of Kitty Hawk. Capt. William J. Tate, first host of the Wrights at Kitty Hawk, speaks of his early association with the brothers in the period 1900–1903.

**MAY 7.** Cleveland Board of Education names new junior high school under construction "Wilbur Wright Junior High School."

**MAY 16.** Orville and Charles I. Lawrence, airplane engine builder, honored at luncheon and reception given by the Philadelphia Chamber of Commerce. In the afternoon Orville attends Medal Meeting of the Franklin Institute and in the evening attends dinner given in honor of the medalists.

**MAY 21.** Orville among delegation meeting Prof. Arthur H. Compton, physicist and Nobel Prize winner, on his arrival in Dayton to speak at Engineers' Club of Dayton.

**MAY 23.** Representative W. Frank James, of Michigan, introduces H.R. 13990 to authorize the President to present the Distinguished Flying Cross to Orville.

The bill passed the House December 13, 1928.

**JUNE 4.** Series of more than 30 metal airfoil models used by Wright brothers in their earliest experiments loaned by Orville and exhibited at Massachusetts Institute of Technology Museum on the occasion of the dedication of the new Daniel Guggenheim Aeronautical Laboratory in Boston, Mass.

**JUNE 10–12.** French air commission headed by Gen. Paul Boucabeille, visiting Dayton, honors Wilbur by having tricolor cushion of flowers placed on his grave.

**JUNE 13.** U.S. Court of Claims dismisses suit brought against the government by the heirs of John J. Montgomery, whose patents were alleged to have been infringed by Wilbur and Orville Wright.

**JUNE 15.** Orville, as member, attends meeting of Daniel Guggenheim Fund for the Promotion of Aeronautics, Inc., at home of Harry F. Guggenheim, Port Washington, Long Island.

**JULY 16–17.** Mrs. Léon Bollée, widow of Léon Bollée, French automobile manufacturer associated with Wilbur during his flights in France in 1908, and her daughter Countess Elizabeth Jean de Vautibault are guests of Orville in Dayton.

**SEPTEMBER 23.** NBC network devotes hour-long program to Orville, in which William G. Shepherd, Collier's staff writer, and Representative John J. McSwain, of South Carolina, pay tribute to him.

**SEPTEMBER 29.** Smithsonian Institution publishes *The Relations Between the Smithsonian Institution and the Wright Brothers* by the secretary of the Smithsonian Institution, Charles G. Abbot, in effort to clarify the controversy with Orville and to correct errors and statements previously made.

This publication was announced to the press in a Scientific News Service release by the Smithsonian Institution on September 30.

Orville prepares statement for publication which was released on September 30 in which he declares that Dr. Abbot's *The Relations Between the Smithsonian Institution and the Wright Brothers* fails to settle the points at issue in the controversy.

**OCTOBER.** Orville serves on executive council of Hoover-for-President Engineers' Committee, organized for the purpose of aiding in the election of Herbert Hoover.

**OCTOBER 24.** Orville—with Thomas A. Edison, Henry Ford, Harvey S. Firestone, Charles M. Schwab, George Eastman, and Julius Rosenwald—is honored as an industrial pioneer of America at dinner given at Hotel Astor in New York by Conference of Major Industries.

**OCTOBER 28.** President Calvin Coolidge designates Orville as a delegate from the United States to the International Civil Aeronautics Conference to be held in Washington, D.C., December 12–14, 1928.

**NOVEMBER 8.** Acting as secretary of the National Aeronautic Association's Committee of Awards, Orville presents second Gordon Bennett International Balloon Trophy to Assistant Secretary of War F. Trubee Davison, who accepts it in behalf of the Army Air Corps.

The trophy had been won by American balloon teams for the last three years.

**NOVEMBER 28.** Nomad Club in Dayton honors Orville at testimonial dinner in commemoration of the 25th anniversary of first flight at Kitty Hawk, December 17, 1903.

**DECEMBER 4.** Representative Lindsay C. Warren, of North Carolina, introduces H.J. Res. 332, to appoint a congressional committee to attend the exercises celebrating the 25th anniversary of the first airplane flight made by Wilbur and Orville.

**DECEMBER 10.** Orville is guest of honor of the city of Dayton in 25th anniversary celebration. In evening ceremony he is presented with an engraved, framed tribute on parchment, written by Howard Egbert of the National Cash Register Co., as a testimonial of appreciation from the people of Dayton.

Numerous delegates to the International Civil Aeronautics Conference to be held in Washington December 12-14 come to Dayton to pay homage to Orville. A wreath is placed at the grave of Wilbur, and delegates visit Orville at his home in the afternoon.

**DECEMBER 12.** President Calvin Coolidge pays tribute to Wright brothers in address at opening session of the International Civil Aeronautics Conference in Washington, D.C.

Orville is honored dinner guest of German Ambassador and Madam Friedrich W. von Prittwhits at German Embassy in Washington, D.C., and meets German delegates attending the International Civil Aeronautics Conference.

**DECEMBER 12.** Two-cent and five-cent U.S. postage stamps issued in commemoration of the International Civil Aeronautics Conference at Washington, D.C., December 12-14, 1928, and the 25th anniversary of the first airplane flight by the Wright brothers, December 17, 1903. The two-cent stamp pictures the first Wright biplane in flight.

**DECEMBER 13.** Orville attends showing of motion picture on the history of aviation at Washington auditorium, Department of Commerce, Washington, D.C.

Orville escorts Lindbergh to platform at Chamber of Commerce Building in Washington to receive the Harmon Trophy.

**DECEMBER 14.** Orville attends dinner for delegates to the International Civil Aeronautics Conference at Mayflower Hotel in Washington, D.C.

**DECEMBER 15.** Lietuvos Aero Klubas [Lithuanian Aero Club] elects Orville honorary member.

Orville honored at public reception in Senate. He is brought to the Senate by Senator Hiram Bingham, of Connecticut, and is introduced to the Senate by Vice President Charles G. Dawes.

**DECEMBER 16.** Orville among more than 200 notable figures making boat trip from Washington to Norfolk aboard steamer District of Columbia en route to Kitty Hawk, N.C.

This was his first trip to Kitty Hawk since 1911.

**DECEMBER 17.** In anniversary statement Orville says, "In twenty-five years flight has been extended from one minute to more than 65 hours; from one half mile to more than four thousand miles; and from a few feet above the ground to more than one half mile above it . . . The great strides made in aviation in the last two years would indicate that we have not yet even approached the limit of the possibilities."

Group pilgrimage from Washington to Kitty Hawk honors Wrights on 25th anniversary. Ceremonies include laying of the cornerstone of the national memorial to the Wrights at the top of Kill Devil Hill and the unveiling by Senator Bingham of a granite monument erected by the National Aeronautic Association on the spot from which the Wrights made their December 1903 flights.

Royal Aeronautical Society holds dinner honoring Wrights at Science Museum in London, with tables arranged around the

Wright 1903 airplane on exhibit there. The dinner is presided over by the president of the Society, Air Marshal Sir W. Sefton Brancker.

**DECEMBER 18.** Congress votes to present the Distinguished Flying Cross to Orville and to Wilbur posthumously.

**DECEMBER 20.** Board of Governors of Kitty Hawk Aviation Yacht & Hunt Club of North Carolina elects Orville life member.

**DECEMBER 21.** President Calvin Coolidge signs bill awarding Distinguished Flying Cross to Orville and Wilbur.

**DECEMBER 27.** Orville is guest of honor at luncheon of Dayton Rotary Club and is presented with a scroll commemorating the occasion. Tribute is paid to Orville by Capt. John A. Macready and Howard Egbert.

**DECEMBER 30.** Plans for a Wilbur Wright memorial at his birthplace in New Castle, Ind., and the establishment of an aviation hall of fame there, initiated by Capt. Benjamin B. Lipsner, are approved by a group of New Castle business and professional men.

A Wilbur Wright Memorial Commission was subsequently organized.

**DECEMBER 31.** Twentieth anniversary of Wilbur's record-breaking flight which won the Michelin Cup at Le Mans, France, is commemorated in memorial service at his birthplace in New Castle, Ind. Special Wilbur Wright memorial letters are mailed from New Castle to officials and visitors attending the ceremony.

## 1929

**JANUARY 30-FEBRUARY 1.** John J. Ide, European representative of the National Advisory Committee for Aeronautics, in Dayton for an inspection tour of Wright Field, is guest of Orville.

**FEBRUARY 4.** New Castle, Ind., honors memory of Wilbur with community banquet, Ind. Governor Harry Leslie is among guests, and Capt. Benjamin B. Lipsner, pioneer air mail pilot, delivers principal address.

**FEBRUARY 11.** Ind. State Representatives Herbert H. Evans and Charles M. Trowbridge introduce House bill 321 to create the Wilbur Wright Memorial Commission, to authorize the commission to accept and maintain the birthplace of Wilbur Wright, to accept appropriations which may be made by the federal government for this purpose, and to make an appropriation.

The bill was passed by the Ind. House and Senate and signed by Ind. Governor Ed Jackson on March 7.

**FEBRUARY 27.** Distinguished Flying Crosses awarded Wilbur and Orville by Act of Congress, December 18, 1928, presented to Orville Wright by Secretary of War Dwight F. Davis in Washington with high officers of the Army and other branches of government in attendance. The citation reads: "Mr. Orville Wright, by his vision, perseverance, courage, and skill, in collaboration with his brother Wilbur Wright, designed,

constructed, and operated the airplane, which at Kitty Hawk, N.C., on December 17, 1903, made the first successful flight under its own power and carrying a human operator, thereby making possible the achievements which are now stirring the emotions and pride of the world."

**MARCH 3.** Katharine Wright Haskell dies of pneumonia at her home in Kansas City, Mo. Orville and brother Lorin are present at her death.

The body was brought to Dayton on March 5 and funeral services were held at the home of Orville on March 6. Burial was in the family plot in Woodland Cemetery beside her brother Wilbur.

**MARCH 13.** Ohio State Senator Miles S. Kuhns of Dayton introduces S.J. Res. No. 23 in Ohio Senate paying tribute to Wright brothers.

The resolution was approved by the Ohio Senate on March 19 and by the House March 21.

**APRIL 3.** Orville and Wilbur tended first official recognition by the state of Ohio as coinventors of the heavier-than-air flying machine in ceremony at Columbus, Ohio. Ohio Governor Myers Y. Cooper presents Orville with a testimonial voted by the Ohio General Assembly on April 1.

**APRIL 9.** Society of Automotive Engineers awards for the first time the Wright Brothers Medal, which is to be given annually to the author of the best paper dealing with aerodynamics, structural theory, or research presented during the year at a meeting of the society.

**APRIL 16.** Dayton Kiwanis Club donates and dedicates bronze tablet showing a life-size profile of the Wright brothers, designed by Chester E. Nicodemus of the Dayton Art Institute, to the Wilbur Wright Junior High School.

The inscription reads: "In commemoration of the achievement of Wilbur and Orville Wright—First to Fly." A luncheon at which Orville was the guest of honor preceded the ceremony.

**APRIL 22.** Orville guest of Ohio Federation of Women's Clubs at All-Dayton program and dinner at Memorial Hall in Dayton.

**MAY 1.** Daniel Guggenheim Medal Board of Award votes to award the Daniel Guggenheim Medal to Orville "for design and construction, with his brother now deceased, of the first successful engine-propelled airplane."

**MAY 29.** Orville attends third aeronautic meeting of American Society of Mechanical Engineers in St. Louis, Mo.

**OCTOBER 21.** Orville is among scientists and inventors invited by Henry and Edsel Ford to opening of Ford Museum and Greenfield Village in Dearborn, Mich., which also marks 50th anniversary of the invention of the electric light by Thomas A. Edison.

At banquet for invited guests Orville is seated next to Will Rogers and Edsel Ford.

**NOVEMBER 15.** Orville attends launching at Wilmington, Del., of the Lotusland, diesel yacht built for his friend Col. Edward A. Deeds.

**NOVEMBER 22.** Wilbur Wright Junior High School in Cleveland dedicated, with Orville as honor guest.

**DECEMBER 17.** Rivanna Garden Club of Charlottesville, Va., erects marker at birthplace of Susan Koerner Wright, mother of Wrights, at Hillsboro, Loudon County, Va.

## 1930

**JANUARY 9.** Daniel Guggenheim Fund for the Promotion of Aeronautics in New York announces that Orville has been awarded the first Daniel Guggenheim Medal.

**FEBRUARY 18.** Secretary of War Patrick Hurley approves findings of the Jury of Award of the American Institute of Architects, which selected the design of Robert P. Rodgers and Alfred E. Poor as the winner from 36 offered in the competition to design the Wright Memorial to be erected at Kitty Hawk, N.C.

The architects are awarded a prize of \$5,000.

**FEBRUARY 24.** Senator Simeon D. Fess, of Ohio, introduces S.J. Res. 144, providing for the creation of a commission to prepare plans for a monument in the city of Washington commemorating the achievements of Orville and Wilbur Wright in the development of aviation.

**FEBRUARY 25.** Orville given honorary membership in Exchange Club of Dayton and in National Exchange Club and is honored at dinner attended by high federal and state government officials, aviation pioneers, and National Exchange Club officers.

**APRIL 3.** Pro. Charles B. Martin, lecturer for the Cleveland Art Museum, is guest of Orville on his visit to Dayton to lecture at the Dayton Art Museum.

**APRIL 8.** The first Daniel Guggenheim Medal presented to Orville "for design and construction, with his brother now deceased, of the first successful engine-propelled airplane" in ceremony at Chamber of Commerce Building in Washington. The presentation is made by Dr. William Durand, president of the Daniel Guggenheim Medal Board.

**APRIL 16.** Dayton Exchange Club honors Wrights in program at Wilbur Wright Junior High School in Dayton. Presentation of an official air marker, painted on the roof of the school, is made by the Exchange Club.

**MAY 14.** Orville attends inaugural exercises for Dr. William C. Dennis of Earlham College, Richmond, Ind.

In Richmond he was the guest of a relative, Mrs. David W. Dennis.

**MAY 21.** Orville is guest of honor at dinner at fourth annual convention of Aeronautic Division, American Society of Mechanical Engineers, held in Dayton, May 19–22.

**JUNE 10.** Orville awarded honorary doctor of science degree by Ohio State University "in recognition of your vision and your engineering accomplishments which have made flying practicable for mankind."

**JUNE 19.** Orville attends commencement exercises in Cambridge, which are in part of the Harvard University Tercentenary celebration and receives honorary doctor of laws degree from Harvard.

**SEPTEMBER 27.** Wright Memorial Bridge, connecting North Carolina mainland and Kill Devil Hill on Carolina banks, completed and opened to traffic.

**OCTOBER 9–10.** Orville is cross-examined and gives extensive testimony on the early Wright experiments and early Wright airplanes in deposition filed in Dayton in His Majesty, the King, Plaintiff v. Myers Canadian Aircraft Co., Ltd., et al., and George Francis Myers, Defendants.

**NOVEMBER.** Cornerstone of monument at Pau, France, honoring first flight at Pau by Wilbur on February 3, 1909, is laid by French fliers Dieudonné Costes and Maurice Bellonte.

**NOVEMBER 18.** Orville accepts membership in the Advisory Committee of the Aeronautical Division of the Museums of the Peaceful Arts, New York.

**DECEMBER 9.** Orville is among prominent national and international celebrities attending banquet in Dayton honoring Edward Canby, founder and vice president of the Dayton Scale Company.

## 1931

**JANUARY 20.** Orville attends 17th anniversary banquet of Engineers' Club of Dayton honoring Col. Edward A. Deeds and Charles F. Kettering.

**JANUARY 30.** Orville invited to serve as member of Advisory Committee of the Department of Aeronautical Engineering, Massachusetts Institute of Technology.

**FEBRUARY 4.** Maj. Gen. John A. DeWitt, quartermaster general, turns first shovelful of dirt marking beginning of excavation for Wright Memorial on Kill Devil Hill, N.C.

**APRIL 16.** Life-size portrait of Bishop Milton Wright, prepared by Don Wallace, Dayton photographer, from an original photograph, unveiled and presented to Wilbur Wright Junior High School, Dayton, in presence of Orville and Lorin Wright.

**MAY 17.** Orville is honorary chairman of the committee for the entertainment of the Air Corps officers and distinguished guests attending the Army Air Corps field exercises in Dayton.

He was among the distinguished officers and civilians attending the press dinner at the Van Cleve Hotel on May 16.

**JUNE 15.** Orville receives honorary doctor of laws degree from Earlham College, Richmond, Ind., in recognition of his services in the promotion of aeronautics.

**AUGUST 19.** Tribute is paid to Orville on his 60th birthday in special radio program over station WEAF and associate NBC stations. The program is sponsored by the Vacuum Oil Company.

**AUGUST 20.** In interview with A. D. Kean, of Toronto Daily Star, Orville declares "that the flying game, in my opinion, has had a little too much publicity—it has made things too prosperous for many of us—money came too fast for proper development of things aeronautical and made it too easy for great expectations to be formed in the public mind. But things are now shaping for steadier control and development. I still predict great achievements, but in ways that will render more perfect stability and greater control of the aviation industry."

**OCTOBER 19.** Following death of Edison on October 18, Orville sends message of sympathy to Mrs. Edison stating that "In the passing of Mr. Edison the world has lost one of its greatest citizens of all time."

## 1932

**JANUARY 30.** Wright brothers' monument, Pau, France, dedicated, commemorating the first flights of Wilbur at Pau in 1909 and the training of the first French aviation officers there. The monument, a slender shaft, was the work of the eminent Pau sculptor Ernest Gabard and shows the likenesses of Wilbur and Orville and a representation of one of their first machines in flight. Addresses were delivered by Paul Tissandier and U.S. Ambassador Walter Edge. The trowel and hammer used in laying the cornerstone of the memorial were later presented to Orville, the gift of the Mayor of Pau.

**FEBRUARY 2.** Orville attends funeral services in Canton, Ohio, for Frank S. Lahm, friend of long standing and passenger with Wilbur at Le Mans on November 18, 1909.

**FEBRUARY 4.** Gen. H.C. Pratt, Materiel Division, U.S. Army Air Corps, Wright Field, acknowledges receipt from Orville of a Wright four-cylinder engine.

**FEBRUARY 18.** Orville selected as one of 13 of the most prominent inventors and scientists in the United States to be guests of the National Commission at the opening of the new Patent Office in Washington on April 11.

**MARCH 28.** International Civitan Distinguished Services Medal presented to Orville by the Dayton Civitan Club. The only two prior recipients of this medal were Gen. John Pershing and Thomas A. Edison.

**APRIL 7.** In statement released by Science Service, Washington, D.C., in answer to the question what the world needs most, Orville says, "I would say that the 'most needed invention' is a motor which economically converts the latent energy in matter into motive power, or economically derives power directly from rays of the sun."

**MAY 26.** Orville pays visit to Kill Devil Hill, N.C., crossing the Wright Memorial Bridge for the first time.

**JULY 21.** Hudson Motor Car Co., in Detroit, presents Orville with new Exxes Terraplane automobile, which had been christened by Amelia Earhart.



*The Wright Brothers Monument at the Wright Brothers National Memorial, Kitty Hawk, North Carolina. (Photo courtesy of the National Air and Space Museum, Smithsonian Institution, image number SI 2003-11332)*

The car was named Terraplane because it was the first to incorporate principles of airplane construction in automobile manufacture.

**OCTOBER 15.** Wright Memorial at Kill Devil Hill, North Carolina, completed.

**NOVEMBER 15.** The Misses Elizabeth C. and Octavia Chanute deposit in the Library of Congress papers of their father, Octave Chanute, in which were included the letters written to him by Wilbur and Orville.

**NOVEMBER 19.** Wright Memorial, Kill Devil Hill, Kitty Hawk, N.C., dedicated. The 60-foot granite memorial is unveiled by Ruth Nichols, noted aviatrix, and accepted by Secretary of War Patrick J. Hurley. Orville is guest of honor and accepts the monument on behalf of himself and his deceased brother, Wilbur. Addresses are delivered by Lindsay C. Warren, Member of Congress from North Carolina, J.C.B. Eringhaus, governor-elect of North Carolina, and Secretary of War Hurley. A letter of congratulations dated November 18 from President Herbert Hoover is read. The monument inscription reads: "In commemoration of the conquest of the air by the brothers

Wilbur and Orville Wright. Conceived by genius. Achieved by dauntless resolution and unconquerable faith."

It has been stated that Orville was the only man ever to see a U.S. national monument erected in his honor during his lifetime.

**DECEMBER 5.** Orville named first honorary fellow of the Institute of Aeronautical Sciences in New York.

## 1933

**FEBRUARY 6.** Board of Managers of Franklin Institute, on the recommendation of its committee on science and the arts, awards Orville the Franklin Medal. "In recognition of the valuable investigations carried out by him and his brother Wilbur, from which they obtained the first reliable scientific data concerning the principles of flight and the design of aeroplanes, upon which they constructed the first heavier than air machine which flew by its own power under human control."

**APRIL 29.** In letter to Lenox R. Lohr, general manager, A Century of Progress Exposition, Chicago, Orville declines invitation

extended on July 2, 1931, to exhibit the original Wright 1903 airplane at the International Exposition to be held in Chicago in 1933.

**MAY 8.** Capt. William J. Tate, representing the Kill Devil Hills Memorial Association, attends dinner at Engineers' Club in Dayton and presents Orville with silver-plated spade used in breaking ground for the Wright Brothers Memorial on February 4, 1931.

Orville honored at testimonial dinner given by Aeronautical Committee of Dayton Chamber of Commerce.

**MAY 17.** In Orville's absence due to illness, Franklin Institute Secretary and Director Dr. Howard McClenahan accepts Franklin Medal, awarded to Orville on February 6, from Franklin Institute president. A certificate of honorary membership is also awarded.

**JUNE 11.** Orville attends special memorial service at Euclid Avenue United Brethren Church in Dayton honoring Wright Field men who had given their lives in service.

**AUGUST 10.** Administrative supervision of Kill Devil Hills Monument National Memorial area transferred from War Department to the National Park Service.

**DECEMBER 11.** Gov. Miriam A. Ferguson, of Texas, proclaims December 17 as National Aviation Day in Texas in honor of the Wright brothers.

**DECEMBER 15.** Council of Royal Aeronautical Society in London elects Orville honorary fellow.

**DECEMBER 16.** Orville is guest at dinner in Philadelphia sponsored by the Franklin Institute in one of numerous nationwide celebrations commemorating the 30th anniversary of the flight of Wright brothers at Kitty Hawk, N.C.

National Aeronautic Association pays homage to the Wright brothers in elaborate banquet at the Mayflower Hotel, Washington, D.C., at which Association President Senator Hiram Bingham reads messages from President Franklin D. Roosevelt and Orville Wright. Several guests pay tribute to Wrights in short speeches, which are broadcast by the National Broadcasting Company over a nationwide network.

**DECEMBER 17.** Orville attends dedication of the Aviation Section of the Franklin Institute in Philadelphia. In the museum is a wall mural, painted by William Heaslip, depicting the first flight in 1903 at Kitty Hawk. Speakers Amelia Earhart, Dr. Howard McClenahan, and Frank H. Russell, the first manager of the Wright Company, laud the Wright brothers.

Delegation consisting of Senator Hiram Bingham, Gen. Frank Hitchcock, Mrs. "Jack" Stearns Gray and others, places laurel wreath on the Wright exhibit at the National Museum as a tribute from the women of America. The wreath is accepted by Dr. Charles G. Abbot, secretary of the Smithsonian Institution.

**DECEMBER 18.** Orville is guest of honor at dinner at Miami Hotel in Dayton. Speakers included Col. Edward A. Deeds, Ohio Gov. George White, former Gov. James M. Cox, and Gen. Henry C. Pratt, Wright Field.

In Le Mans, France, French observe 25th anniversary of Wilbur's historic airplane flights at nearby Camp d'Auvours. Wilbur's first two French pupils, Marquis Charles de Lambert and Col. Paul N. Lucas Girardville, recount their experiences as Wright students.

Dr. Charles G. Abbot, secretary of the Smithsonian Institution, announces that a committee of three is to be appointed to investigate the controversy between the Smithsonian Institution and Orville. Col. Charles A. Lindbergh is suggested as one of the intermediators.

**DECEMBER 19.** Orville issues statement that he is pleased to learn that the Smithsonian Institution is willing to accept his proposal made in 1925 that an impartial committee be appointed to investigate the points at issue in the controversy between the Smithsonian Institution and himself. He states further that Dr. Abbot's proposal to have Lindbergh serve as one of the members of the committee meets with his hearty approval.

## 1934

**MARCH 13.** Orville is named by Secretary of War George H. Dern to a special committee of aeronautical experts to investigate the carrying of mails by U.S. Army, but he declines to serve because ill health does not permit him to travel.

**MARCH 31.** In interview with Fred C. Kelly, published in magazine Today, Orville declares that sport, not capitalism, furnishes the true incentive to human achievement, citing his own experience in the development of the airplane. He foresees drift toward some form of socialism in the United States.

**APRIL 3.** National Institute of Social Sciences, New York, votes Orville gold medal, to be awarded him the second time on February 21, 1940. Since did not attend either ceremony and it was not given in absentia, Orville never received the medal.

**APRIL 11.** Wright model EX (Vin Fiz), formerly in Carnegie Museum in Pittsburgh, transferred to the National Museum in Washington, where it is renovated and exhibited.

**JUNE 9.** Orville accepts honorary membership in Carolina Aero Club, Greensboro, N.C.

**OCTOBER.** Orville appointed member of Oakwood Library Board of Trustees, serving in this capacity, and for 11 years as vice-president, until his resignation on December 19, 1946.

**OCTOBER 8.** Louis Blériot, pioneer French aviator, attending National Aeronautic Association meeting in Washington, October 11–13, flies over Kitty Hawk, N.C., and drops wreath bearing inscription "Louis Blériot to Wilbur Wright" over Wright Memorial.

**NOVEMBER 24.** December 17th, anniversary date of first successful heavier-than-air flight, designated National Aviation Day by Eugene I. Vidal, director of Bureau of Air Commerce, Department of Commerce.

**DECEMBER 6.** Orville appointed member of Society of Automotive Engineers' Aircraft Activity Committee for 1935.

**DECEMBER 17.** In observance of 31st anniversary of Wrights' 1903 flights, Marshall Earl Reid flies Wright model B airplane, given to the Franklin Institute by Grover Bergdoll, from Camden Airport.

Eugene I. Vidal personally delivers to Orville, at his home in Dayton, a letter of congratulation from President Franklin D. Roosevelt on the anniversary of the first successful Wright flight. Mr. Vidal is accompanied by Maj. Gen. Benjamin D. Foulois, Army Air Corps Chief, and Rear Adm. Ernst J. King, chief of the Navy Bureau of Aeronautics.

**DECEMBER 23.** Mrs. Mabel Hammer Ashton, daughter of William J. Hammer, consulting engineer and early friend of the Wright brothers, visits Orville at his home in Dayton.

## 1935

**JANUARY 5.** Orville is one of five chosen as members of an advisory board administering the James Cabot Professorship of Air Traffic Regulation and Air Transportation at Norwich University, Northfield, Vt.

**JANUARY 16.** Wright model B airplane, produced 1910–1911, formerly owned by Wright-trained Grover Bergdoll of Philadelphia, placed on exhibition in Franklin Institute, Philadelphia.

**JUNE 10.** Orville receives honorary doctor of laws degree from Huntington College, Huntington, Ind.

**OCTOBER 16.** Orville plants a tree, which is dedicated to him, in the Dawes Arboretum in Columbus, Ohio.

A bronze tablet was later erected there to commemorate this event.

**DECEMBER 12.** James V. Piersol, aviation editor of the Detroit News, calls on Orville in Dayton on behalf of Henry and Edsel Ford in first of exploratory talks leading to purchase by Henry Ford of the original Wright brothers' home and workshop in Dayton, which were later transported to Greenfield Village, Dearborn, Mich.

**DECEMBER 17.** Rear Adm. Ernest J. King, Eugene I. Vidal, Dr. George W. Lewis, and Brig. Gen. Oscar Westover come from Washington to Dayton to deliver to Orville letter from President Franklin D. Roosevelt extending greetings on the 32d anniversary of the Kitty Hawk flights in 1903.

## 1936

**FEBRUARY 20.** On the death of Gen. William Mitchell, whom he had known for more than 25 years, Orville pays him tribute saying, "He forced the attention of the military and government personnel to the value of the airplane, at a time when no one else could have done it."

**FEBRUARY 26.** Orville elected honorary member of International Mark Twain Society, Webster Groves, Mo.

**MARCH 11.** Du Pont radio program "The Cavalcade of America," in program No. 23, "Perseverance," portrays the early struggles of the Wright brothers.

**APRIL 14.** Poet Carl Sandburg, after his lecture program in Dayton, calls on Orville at his home.

**APRIL 27–29.** National Academy of Sciences, at annual meeting in Washington, elects Orville member.

**MAY 29.** Jacob Wilk, Warner Bros. Pictures, comes to Dayton to see Orville regarding a motion picture dealing with the Wright Brothers.

**JUNE 27.** Orville visits Dearborn, Mich., and is guest of the Fords and of Fred I. Black, in charge of Ford's Industrial Museum in Dearborn.

**JULY 2.** Henry Ford purchases building formerly occupied by Wright Cycle Company and the laboratory used by the Wrights in designing and building their successful airplane, with a view to restoring them and moving them to Greenfield Village in Dearborn, Mich.

**OCTOBER 27.** Henry and Edsel Ford visit Dayton to view building in Dayton formerly occupied by the Wright Cycle Company, which had been purchased by Ford on July 2, and to discuss plans for dismantling the building.

The Fords, Fred I. Black, director of the Greenfield Village museum, I.B. Rock, publisher of the Dayton Journal-Herald, James M. Cox, publisher of Dayton Daily News, and William E. Scripps, of the Detroit News, are luncheon guests at the Wright home.

**NOVEMBER 5.** Old Wright workshop torn down and removed to Dearborn, Mich.

**NOVEMBER 12.** Orville visits and inspects the Glenn I. Martin Company factory in Baltimore, Md.

**NOVEMBER 23.** Orville attends centennial celebration of American patent system in Washington.

**DECEMBER 10.** Eugene I. Vidal, director of Bureau of Air Commerce, proclaims December 17, 1936, as National Aviation Day.

**DECEMBER 17.** President Roosevelt and Henry Ford are among those sending congratulatory messages to Orville on the 33rd anniversary of first powered flight.

Similar messages were received from Henry Ford by Orville in 1937, 1941, 1942, 1943, 1944, and 1945.

Executive Committee of National Advisory Committee for Aeronautics, of which Orville is a member, holds its meeting at home of Orville in Dayton.

## 1937

**JANUARY 9.** Orville is among guests paying tribute to his friend Charles F. Kettering, vice-president and director of General Motors Corporation and general director of the General Motors Laboratories, at civic testimonial dinner in Dayton.



*View of the Wright Cycle Co., at the Henry Ford Museum and Greenfield Village, Dearborn, MI. Photograph dated 1937. (Photo courtesy of the National Air and Space Museum, Smithsonian Institution, image number SI 2003-11327)*

**JANUARY 20.** Orville accepts membership on committee to celebrate the 10th anniversary of the Lindbergh flight on May 20, 1937.

**JANUARY 28–FEBRUARY 6.** American Legion, at National Aviation Show in Grand Central Palace in New York, solicits signatures for petition to be submitted to Board of Regents of Smithsonian Institution asking retraction of priority accorded Aerodrome of Samuel P. Langley as first machine capable of sustained flight.

**APRIL 27.** Robert H. McIntyre, treasurer of Ind. Wright Memorial Commission, seeks to enlist support of Congress in appropriating funds for the construction of a national shrine, memorializing Wright brothers' invention of the airplane, at the birthplace of Wilbur near New Castle, Ind.

**MAY 14.** Orville is among guests attending dinner commemorating completion of Thomas-Hochwalt Laboratories in Dayton.

**JUNE 15.** Bronze busts of the Wright brothers by Dayton sculptor Seth M. Velsey installed in rotunda of the Army Aeronautical Museum, Dayton.

**JUNE 21.** Orville accepts honorary membership in Wright Brothers Chapter of the National Aeronautic Association of North Carolina.

Orville prepares and signs his last will and testament.

**JUNE 25–26.** Orville attends commencement exercises at Edison Institute in Dearborn, Mich., on June 25 and is guest of Ford family at Dearborn Inn.

**OCTOBER 28.** Orville visits Dearborn, in connection with restoration of Wright workshop in Greenfield Village.

**NOVEMBER 16.** Senator Robert R. Reynolds, of North Carolina, introduces S.J. Res. 237 in Congress providing for an appropriation of \$50,000 to develop a suitable site at Kitty Hawk, N.C., to house and exhibit the 1903 Wright airplane.

**DECEMBER 17.** Institute of Aeronautical Sciences inaugurates a new annual lecture series, endowed by Edmund C. Lynch in honor of his brother, Vernon Lynch, to be known as the Wright Brothers Lecture, with speakers from abroad and the United States to alternate in giving the lecture. Orville attends first lecture given at Columbia University in New York.

In interview at Columbia University, reported in New York Times on December 18. Orville foresees great progress in aviation in next decade.

In evening he attends Institute's "Honors Night" meeting at Biltmore Hotel.

Women's International League for Peace and Freedom presents Orville with scroll on 34th anniversary of Kitty Hawk first flight.

## 1938

**JANUARY 26.** Some of the Wright brothers' original calculations in aerodynamics are released for the first time, with Orville's permission, in paper entitled "Wright and Prandtl: Some Early Wind Tunnel Tests Interpreted in the Light of Prandtl's Induction Theory," prepared by William F. Gerhardt, Wayne University, Detroit, and presented at annual meeting of the Institute of Aeronautical Sciences, New York.

**APRIL 8.** A special cachet to be used in connection with the dedication of the restored Wright home and workshop in Greenfield Village on April 16 is authorized by the Post Office Department.

**APRIL 10.** Ford Motor Company "Sunday Evening Hour" radio program, a talk entitled "Fathers of Flight" by William J. Cameron, broadcast by CBS, is devoted to the Wright Brothers.

**APRIL 16.** Wright brothers' home and shop in Greenfield Village, Dearborn, restored by Henry Ford as a memorial to the Wright brothers, is dedicated on the 71st anniversary of Wilbur Wright's birth. Dedicatory exercises are held on the grounds of the Wright home and shop, with Orville and distinguished guests from the United States and abroad in attendance.

The dedicatory address is by William J. Cameron of the Ford Motor Company. Charles F. Kettering, president and director of General Motors Corporation, acts as roastmaster at dinner closing the celebration. The speakers, friends and associates of Orville Wright, are Dr. George W. Lewis, director of aeronautical research for the National Advisory Committee for Aeronautics, Col. Frank P. Lahm, first military air passenger of the Wrights, Walter R. Brookins, first American civilian student, and Griffith Brewer, first English airplane passenger with Wilbur in 1908.

**APRIL 28.** Oil painting of Katharine Wright presented to Wilbur Wright Junior High School in Dayton.

The portrait was to complement a similar one of Bishop Milton Wright presented at an earlier date.

**MAY 19.** Orville, at Dayton Airport, greets special airplane carrying pouches of air mail making commemorative flight from Kitty Hawk, N.C., to Dayton in honor of the Wright brothers, conducted as part of 20th anniversary of the inauguration of regular air mail service and as part of First National Air Mail Week, May 15–21.

**SEPTEMBER 12.** Wright Brothers Memorial Wind Tunnel, Massachusetts Institute of Technology, Boston, Mass., is "dedicated as a memorial to the methods of controlled experiment consistently applied by the Wright brothers in their historic conquest of the air."

Speakers at the dedication include Dr. Godfrey I. Cabor, Griffith Brewer, Dr. George W. Lewis, and MIT president Karl T. Compton.

**SEPTEMBER 22,** Miami Conservancy Court in Dayton approves plan for a park in Dayton development near Wright Field as Wright brothers' memorial.

Orville presented in Dayton with honorary membership in Ligue Internationale des Aviateurs by its president, Charles Kerwood.

**SEPTEMBER 28.** Wright 1903 airplane on exhibit in Science Museum in London removed, dismantled, and packed for safe-keeping as precaution against possible war damage.

On October 27 the airplane was again placed on exhibit in belief that danger of damage was slight.

**OCTOBER 12.** Orville receives certificate of membership in Order of Daedalians, society composed of pilots of World War I and earlier.

**DECEMBER 3.** Orville represents the American Association for the Advancement of Science at the inauguration of Rev. John H. Elbert as president of the University of Dayton.

**DECEMBER 5.** U.S. Court of Claims decision rendered against the plaintiff in suit brought June 2, 1923, against the United States government by George Francis Myers, alleging infringement of his patent No. 1,226,985 for a flying machine, granted May 2, 1917.

Orville had submitted depositions in Dayton on October 28, 1925, February 28, 1927, and October 14, 1935, relating to Wright brothers' patents and in support of government's case.

**DECEMBER 8.** Father John M. Sailer, pastor of St. Ages Church in Dayton, proposes at Catholic Noontide Club that a chapel be built at Kitty Hawk as a memorial to the Wrights.

**DECEMBER 17.** Public observance of 35th anniversary of the first successful airplane flight at Kitty Hawk, N.C., is held at the National Cash Register auditorium in Dayton. Henry Ford is guest of Orville at small dinner party at his home. Other guests are Fred I. Black, Charles F. Kettering, and Col. Edward A. Deeds.

In interview at his laboratory in Dayton, Orville states, "Our laboratory experiments made the first flight possible" and "Today's most important advances in the airplane itself again are coming from the study of aerodynamics."

## 1939

**JANUARY 3.** Orville made honorary life member of National Inventors Association, but, in letter of January 14, Orville declines because it was in general practice to do so when he knew little about the organization conferring the honor.

**JANUARY 19.** Representative Thomas A. Jenkins, of Ohio, introduces H.J. Res. 123, providing for the completion of the unfinished frieze in the Capitol rotunda depicting the history of aviation, including the invention of the airplane by the Wright brothers.

**JANUARY 26.** Representative J. Hardin Peterson, of Florida, introduces H.J. Res. 134, designating August 19, Orville's birthday, as Aviation Day.

Similar bills were introduced by Representative Jennings Randolph, of West Virginia, H.J. Res. 147, on February 2; Representative William A. Ashbrook, of Ohio, H.J. Res 229, on March 25; and Senator Claude Pepper, of Florida, S.J. Res. 111, on April 3.

**FEBRUARY 14.** Wright Library, located in Katharine Wright Park in the Oakwood section of Dayton, and honoring Orville, Wilbur, and Katharine, dedicated, with Orville in attendance.

Orville served as vice president of the library board.

**FEBRUARY 20.** Dayton civic and business leaders, including Orville, call on Brig. Gen. Augustine W. Robins to express regret at his leaving Dayton and wish him well in his new assignment as chief of the Air Corps Primary Training School at Randolph Field, Tex.

**MARCH 4.** Orville named honorary member of Aerial Nurse Corps of America.

**MARCH 24.** Orville attends luncheon in Dayton honoring Brig. Gen. George H. Brett, new chief of Air Force Materiel Division, Wright Field.

**APRIL 15.** Orville attends spring dinner meeting of Gridiron Club at Willard Hotel in Washington, leaving Dayton by automobile on April 14.

**APRIL 16.** Harry and Douglas Corrigan and Dr. John C. Wynkoop among those paying their respects to Orville on his visit to Washington.

**APRIL 18.** Orville, accompanied by Earl N. Findley and Capt. William J. Tate, visits Kitty Hawk, N.C.

**APRIL 20.** Orville attends semiannual meeting of the National Advisory Committee for Aeronautics in Washington. Following this meeting Orville confers with fellow member Charles A. Lindbergh on Orville's controversy with the Smithsonian Institution.

**MAY 15.** Orville, at Engineers' Club of Dayton, joins in personal tribute to Dr. Arthur E. Morgan, creator of Miami Valley flood prevention system.

**JUNE 9.** Orville is passenger on 30-minute flight over Dayton in Douglas DC-4 aircraft, piloted by Benny Howard.

Fellow passengers are Maj. Carl A. Cover, vice president of the Douglas Aircraft Co., and William F. Mentzer, chief engineer for United Airlines.

**JUNE 12.** Orville attends commencement exercises at Earlham College at which Herbert Hoover is given honorary degree. Orville marches in procession with Herbert Hoover and the president of Earlham College, David Worth Dennis.

**JUNE 30.** Senator Claude Pepper, Florida, introduces S. 2735 granting Orville honorary pilot certificate No. 1.

The bill passed the Senate August 1, 1939, the House June 6, 1940, and was approved by President Roosevelt June 13, 1940.

**AUGUST.** Institute of the Aeronautical Sciences in New York announces receipt of collection of aeronautical materials of Hart O. Berg, business associate of the Wrights, including valuable and rare photographs, books, and clippings, which provide documentary material on the early work of the Wright brothers.

**AUGUST 19.** Designated National Aviation Day by proclamation of President Roosevelt on July 25.

**AUGUST 20.** Weekly Dayton municipal band concert at Island Park is dedicated to the Wright brothers in recognition of Orville's birthday and National Aviation Day on August 19.

**AUGUST 28.** Orville elected honorary member of the Minnicog Yacht Club, Georgian Bay, Ontario.

**SEPTEMBER 9.** National Federation of Post Office Clerks, at annual meeting in Houston, Tex., confers honorary membership on Orville "in recognition of his illustrious achievements as the first pilot of an airplane in successful flight."

**OCTOBER 6.** Newly organized post of the Regular Veterans Association in Fairfield, Ohio, adopts name of Wright Brothers Post No. 140 in honor of Wilbur and Orville.

**NOVEMBER 6.** Orville bequeathed, by will of his cousin Mrs. Emma Zeller Dennis, a white china tea set and a chest of drawers belonging to his grandfather.

The heirlooms were subsequently presented to the Edison Institute, Dearborn, Mich.

**NOVEMBER 16.** Dr. Vannevar Bush, chairman of National Advisory Committee for Aeronautics, in Dayton to attend annual meeting of NACA, is guest at home of Orville.

**NOVEMBER 20.** Vilhajalmur Stefansson, Arctic explorer, in Dayton on a lecture tour, is house guest of Orville.

**DECEMBER 1.** Lorin Wright, older brother of Orville and president of Miami Wood Specialty Company, dies in Dayton, age 77.

**DECEMBER 4-8.** Air Line Pilots Association, at annual convention, votes Orville honorary life membership.

Association President David I. Behnke planned to present membership certificate personally to Orville in Dayton but, unable to do so, sends it to him on November 15, 1940.

## 1940

**FEBRUARY 25.** Orville made honorary life member of Dayton Exchange Club.

**FEBRUARY 27.** Orville is among those honored at National Pioneers Banquet sponsored by the National Association of Manufacturers at Waldorf Astoria Hotel, N.Y., and is awarded a Modern Pioneer Plaque designed by the noted sculptor René Chambellan.

**MARCH 5.** Orville accepts appointment to serve on National Committee to Sponsor the Sesquicentennial of the Founding of the Patent Office.

**APRIL 16.** On second anniversary of dedication of the restored Wright brothers' home and workshop in Dearborn, Henry Ford, in telegram to Orville, expresses his further appreciation at having the two buildings in Dearborn as a memorial to the achievements of the Wrights.

Similar messages were received from Henry Ford by Orville in 1941, 1943, 1944, and 1945.

**MAY 18.** Orville accepts honorary chairmanship of organization in Dayton with purpose of enrolling 1,100 men for Army Air Corps training.

**MAY 27.** Senator Robert R. Reynolds, of North Carolina, introduces S.J. Res. 265, authorizing issuance of an airmail National Aviation Day stamp to be placed on first-day sale on August 19, 1940, at Kitty Hawk, N.C., as representing the state in which the first successful airplane flight was made.

**JUNE 8.** Orville is among Dayton civic leaders honoring Mrs. Julia Carnell at dinner at the Dayton Art Institute, of which she was a benefactor.

**JULY.** Wright 1903 airplane removed for second time from place of exhibit in Science Museum in London and placed in storage for duration of war to protect against war damage.

**JULY 10.** Representative Harry R. Sheppard, of California, introduces H.J. Res. 584, providing for the return of the Wright 1903 airplane to the United States, to be placed on permanent exhibit under such conditions as may be jointly approved by Orville Wright and the Congress.

**JULY 27.** Secretary of Commerce Harry I. Hopkins designates Orville as member of National Inventors Council.

**AUGUST 19.** Wilbur and Orville Wright Memorial, in Dayton, on Wright Brothers Hill, overlooking the site of Huffman Prairie, where the Wrights experimented with their airplanes of 1904 and 1905, is dedicated. Dedicatory address is delivered by publisher and former Ohio Governor James M. Cox, a personal friend of Orville. Unveiling of the monument is by Leontine Jameson and Marianne Miller, grandnieces of Orville. Tablets on the monument pay tribute to the Wrights and list the names of

119 pioneer flyers who learned to fly under the Wright brothers. Edward P. Warner, vice chairman of the Civil Aeronautics Board presents Orville with Honorary Pilot's Certificate No. 1.

**AUGUST 27.** Representative Robert I. Mounton, of Louisiana, introduces H.J. Res. 595, authorizing the participation of the United States in the celebration of a Pan American Aviation Day, to be observed annually on December 17.

Similar resolutions were introduced by Representative Charles A. Plumley, of Vermont, on August 29, H.J. Res. 597, and by Senator William H. Smathers, of New Jersey, on September 6, S. J. Res. 295. The resolution passed the Senate on September 30, the House on October 2, and was signed by President Roosevelt on October 10.

**OCTOBER 16.** President Roosevelt visits Dayton and is accompanied by Orville on a tour of the area.

**NOVEMBER 18.** The President proclaims December 17, 1940, and each December 17 thereafter, as Pan American Aviation Day.

## 1941

**APRIL 25.** Orville meets with Archibald McLeish, Librarian of Congress, in Washington to discuss Wilbur's letters to Octave Chanute in the Chanute collection of the Library of Congress, requesting that Wilbur's letters be excluded from public inspection. The request was denied on legal grounds.

**JUNE 12.** Orville is honored guest at ceremonies dedicating Wright Aeronautical Corporation's new Wright Plant in Lockland, Ohio, suburb of Cincinnati.

**AUGUST 19.** Orville observes 70th birthday at his summer home on Lambert Island, Georgian Bay, Canada.

**OCTOBER 23.** Orville visits National Inventors Council headquarters in the Department of Commerce building in Washington.

**NOVEMBER 29.** Orville is among 150 industrial civic leaders attending luncheon at Dayton Country Club who pledge money for purchase of land to afford access to Dayton Municipal Airport Administration building.

## 1942

**MAY 7.** Orville presented in Dayton with honorary membership certificate by the National Federation of Post Office Clerks.

The membership had been conferred on him on September 9, 1939, at the Federation's annual meeting.

**MAY 27.** Fred C. Crawford, president of Thompson Products, Inc., Cleveland, sends Orville original painting by Charles H. Hubbell entitled "Wright Biplane-1903" appearing in Thompson Products calendar for 1941 in which early airplanes are depicted.

**JUNE 27.** Orville declares that Grover Cleveland Bergdoll, early Wright Flying School student, was unduly persecuted by the War

Department and was maligned by newspapers at the instigation of the U.S. Army.

Orville attends exercises in commemoration of the 70th anniversary of the birth of Negro poet Paul Laurence Dunbar at Dunbar's home in Dayton.

**OCTOBER 21.** Orville attends dinner given by Curtis C. Schiffeler, manager of the Hotel Raleigh in Washington, D.C., to meet Chief Justice and Mrs. Harlan Stone.

**OCTOBER 24.** Smithsonian Institution brochure The 1914 Tests of the Langley "Aerodrome" is published, containing apologies and retractions of former statements and marking the end of the Smithsonian-Wright controversy.

**NOVEMBER 20.** Institution of Mechanical Engineers, London, confers honorary life membership on Orville.

## 1943

**MAY.** Orville Wright Air Scout Squadron organized in Dayton.

**MAY 13.** Orville attends dedication of new National Advisory Committee for Aeronautics' Aircraft Engine Research Laboratory (now Lewis Research Center in Cleveland).

First authorized biography of Wright brothers, Wright Brothers, by Fred C. Kelly, published by Harcourt Brace and Co., New York.

**MAY 24.** Orville given the Copernican citation "for pioneering in aviation" by the Kosciuszko Foundation in New York at program commemorating 400th anniversary of the death of Polish astronomer Nicholas Copernicus. He is unable to attend ceremony.

**AUGUST 20.** Orville accepts two scale models of Wright aircraft presented to Dayton Art Institute by Air Scouts, division of Boy Scouts of America.

**AUGUST 24.** Orville, as member, attends meeting of National Inventors Council in Cleveland.

**OCTOBER 5.** Gov. J. Melville Broughton, of North Carolina, proclaims December 17 as Kitty Hawk Day and as a day of tribute to the Wright brothers.

**OCTOBER 7.** President Roosevelt invites Orville to come to Washington on December 17 to be honored at dinner on the occasion of the 40th anniversary of the first flights by the Wright brothers in 1903. Orville accepts in a letter to the President dated October 16. In a following letter dated November 16 Orville accepts the President's suggestion that announcement of the future return of the 1903 Wright airplane from England be made at this dinner.

**OCTOBER 20.** To commemorate the 40th anniversary of the first successful airplane flights by Wilbur and Orville, Representative Harry P. Jeffrey, of Ohio, submits H.J. Res. 175, expressing the "gratitude of the nation." Senator Robert P. Taft, of Ohio, submits similar resolution, S.J. Res. 90, in Senate on October 21. Favorable reports are submitted by Representative Donald I. O'Toole, November 16, and by Senator Clyde S.

Bailey, December 3. President Roosevelt signed the resolution on December 17.

**NOVEMBER 2.** Orville, en route to his laboratory is slightly injured in accident in Dayton when his automobile is struck by another.

Interview by Fred C. Kelly published in Dayton Daily News and New York Herald Tribune, in which Orville reminisces, deplored the role of airplane in war and stressing the benefits of flying.

**NOVEMBER 3.** Orville is honored guest at dinner given by the Lawyers Club of Dayton in celebration of the 50th anniversary of admission to bar of Ezra M. Kuhns, secretary of general counsel for the National Cash Register Company, Dayton.

**DECEMBER.** U.S. Air Services publishes 40th anniversary issue honoring Wright brothers.

The issue included "Our Life at Kitty Hawk" by Orville, consisting of excerpts of letters written at Kitty Hawk by Orville and Wilbur to their sister, Katharine, in Dayton, and contributions by Dr. George W. Lewis, Grover Loening, Gen. Henry H. Arnold, Col. T. DeWitt Milling, Maj. Gen. Benjamin D. Foulois, Glenn I. Martin, Gen. Frank P. Lahm, Thomas R. Reed, Comdr. Allan F. Bonnalie, Maj. Al Williams, Capt. William J. Tate, and Gov. J. Melville Broughton.

**DECEMBER 8.** Orville writes Col. E.E.B. Mackintosh, director and secretary of the Science Museum, London, of his decision to have the Kitty Hawk airplane returned to the United States and informs him that the public announcement of this fact is to be made by President Roosevelt on December 17.

**DECEMBER 13.** Gov. John W. Bricker proclaims week of December 17 as Ohio Aviation Week.

**DECEMBER 16.** Orville, together with Dr. William S. Farren, of England, is honored at dinner at Shoreham Hotel in Washington, D.C.

**DECEMBER 17.** Orville attends private luncheon of National Advisory Committee for Aeronautics in Washington and later attends regular meeting of NACA.

Member of Cabinet and other high-ranking government officials, military, diplomatic, and aviation representatives join in tribute to Orville at dinner at Statler Hotel in Washington, D.C., in observance of 40th anniversary of 1903 flight. Orville is presented with plaque sent by Dayton Chamber of Commerce "for his world leadership in aviation, not only in its infant years, but during the four decades of its development, for his scientific attainments, and for his exemplification of the higher ideals of citizenship."

President Roosevelt, in message read at dinner, announces that the Wright 1903 airplane will be returned to the United States from England after the war. A reception for Orville is held before the dinner.

Orville presents Robert J. Collier Trophy to his former student Gen. Henry H. Arnold for outstanding achievement in aviation in 1943.

"Working for Wings," photo-story of aviation cadet training at Santa Ana Army Air Base, Santa Ana, Calif., dedicated to Orville and Wilbur.

**DECEMBER 19.** Orville receives honorary doctor of engineering degree from the University of Dayton in "recognition of his achievements in aeronautical science and of his service."

**DECEMBER 29.** A two-ton marble monument commemorating early Wright flights is unveiled at Maxwell Air Force Base, Montgomery, Ala. On the site of the Wright brothers first civilian pilot training school.

## 1944

Orville constructs cypher machine for automatic selective coding of messages.

**JANUARY 8.** Representative Harry P. Jeffrey, of Ohio, presents Orville with copy of joint resolution passed by House of Representatives on November 24 and by Senate on December 3 to commemorate the first successful flight of a heavier-than-air flying machine in 1903.

**APRIL 4.** Aeronautical Chamber of Commerce of America confers honorary life membership to Orville.

**APRIL 26.** Orville is passenger on Army C-69 Lockheed Constellation demonstration flight over Dayton, originating from Wright Field, and handles the controls for a short period.

**JUNE 16.** Orville among aviation leaders attending meeting of the Institute of the Aeronautical Sciences at Engineers' Club in Dayton.

**JULY 21.** Orville attends ceremonies marking the production of the 50,000th airplane engine carburetor manufactured by Chandler Evans Corp. in Dayton.

**AUGUST 4-5.** Orville participates in meeting of the Institute of Aeronautical Sciences in Dayton.

**AUGUST 24.** Keel of U.S.S. Wright laid.

**NOVEMBER 30.** Orville receives certificate of life membership in Rotary Club of Dayton.

**DECEMBER 16.** Orville, interviewed in Dayton by James V. Piersol, declares that airpower always will be the backbone of the international policy of nations.

**DECEMBER 17.** Orville attends meetings of the National Aeronautic Association and the Institute of the Aeronautical Sciences in Washington. On this occasion, as a previous recipient of the Robert J. Collier Trophy, he was presented with a certificate of award for the year 1913.

## 1945

**MARCH 29.** Orville attends graduation ceremonies of Army Air Force Engineering School in Dayton.

**APRIL 3.** Orville gives to Huntington College, Huntington, Ind., books and publications of a religious nature which had belonged to his father.

**JULY 14.** Wright 1903 airplane reassembled at South Kensington Science Museum following return of plane from underground storage for safekeeping during World War II.

**AUGUST 1.** Orville participates in review in Dayton of officers and troops from Wright and Patterson Fields marking 38th birthday celebration of Army Air Force.

**AUGUST 30.** Orville visits Hudson Motor Car Company factory in Detroit and views first 1946 model Hudson automobile to come off assembly line.

**SEPTEMBER 1.** Aircraft carrier U.S.S. Wright, named for Wilbur, launched and christened at Camden, N.J., by Mrs. Harold S. Miller, niece. Miss Marianne Miller, her daughter, is maid of honor.

It was commissioned February 9, 1947.

**OCTOBER 12-13.** Orville views Air Technical Service Command Fair at Wright Field, Dayton.

**OCTOBER 20.** Orville rides with Gen. George C. Kenney, U.S. Army Air Force, in parade honoring General Kenney on his return to Dayton from the Far East. Orville later attends banquet in General Kenney's honor.

**DECEMBER 17.** Orville is guest of honor at luncheon at Wright Field in observance of 42d anniversary of Wright brothers' flight at Kitty Hawk. He later tours Wright Field's radar and aircraft design laboratories and visits the Wright brothers' memorial in the field's museum building.

## 1946

**JANUARY 30.** Orville among civil and military dignitaries honoring Lt. Gen. Nathan F. Twining, commanding general of Army Air Force Air Technical Service Command in Dayton.

**JANUARY 31.** Orville participates in dinner marking anniversary of Dayton District Development Committee.

**APRIL.** President Harry S. Truman signs the certificate of the Award of Merit to Orville for distinguished service with the National Advisory Committee for Aeronautics during World War II.

Due to delays, the award ceremony was not scheduled to take place until two years later, when plans were made for Orville to come to Washington on January 15 for the presentation. But his health would not permit, and he died without personally receiving the award.

**MAY 17.** Orville elected honorary member of the National Council of the Boy Scouts of America.

**JUNE 24.** Orville is luncheon guest of Deane W. Malott, chancellor of University of Kansas in Lawrence, Kans.

Orville was in Lawrence to attend wedding of his grandniece, Margaret Steeper, on June 23.

**JULY 18.** Orville is guest of the Dayton Rotary Club and meets Dr. Carroll A. Hochwalt and hears him discuss the results of the Bikini atomic bomb tests.

**JULY 20.** Orville receives Air Scout encampment delegation at his home and is given official copy of program of encampment at Wright Field.

**AUGUST.** Ohio General Assembly adopts H.R. No. 136, introduced by Ohio State Representative John Poda, extending felicitations to Orville on his 75th birthday.

**AUGUST 16.** In prepared statement Orville decries injection of socialism and capitalism into Paris Peace Conference negotiations.

**AUGUST 19.** On his 75th birthday Orville is honored at luncheon given by close friends and associates in Dayton. At his laboratory he later is presented by Maj. Gen. Lawrence C. Craigie, of the Air Materiel Command, with a plaque on behalf of the Army Air Force commemorating his contributions to aeronautics.

**AUGUST 29.** Orville is among distinguished guests honoring his friend, Charles F. Kettering, research director of General Motors Corp., at program in Central Park, Loudonville, Ohio, on his birthday.

**SEPTEMBER 25.** Gael Sullivan, second assistant postmaster general, presents Orville with new five-cent airmail stamp album in ceremonies in Dayton marking the arrival of first "flying postoffice."

**OCTOBER 1.** Orville attends meeting of Engineers' Club in Dayton and hears talk by Charles F. Kettering on the future of science and engineering.

**DECEMBER 9.** Original Wright brothers' wind tunnel balances, misplaced when moved December 6, 1916, discovered in attic of Orville's laboratory in Dayton.

**DECEMBER 12.** War Department and Navy Department send Orville certificate of appreciation for patriotic service in aiding the prosecution of the war as a member of the National Inventors Council.

**DECEMBER 17.** President Harry S. Truman sends a congratulatory telegram to Orville "on behalf of your fellow countrymen" on the 43d anniversary of first successful airplane flight at Kitty Hawk, N.C. Dayton friends greet him at his office, and 200 fighter planes fly over Wright Memorial in salute.

Lt. Gen. Nathan F. Twining places memorial wreath on grave of Wilbur in observance of this occasion.

## 1947

**JANUARY 6.** Representative Thomas A. Jenkins, of Ohio, introduces H.J. Res. 36, providing for the utilization of a part of the unfinished portion of the historical frieze in the Capitol rotunda to portray the history of aviation, including the portrayal of the achievements of Wilbur and Orville Wright.

**JANUARY 21.** Vilhajalmur Stefansson spends afternoon visiting Orville in Dayton at his laboratory.

**JANUARY 28.** In special ceremony Gen. Henry H. Arnold places wings autographed by Orville at highest point on the

Fliers' Wall at the international shrine for aviators at the Mission Inn, Riverside, Calif.

**FEBRUARY 9.** U.S.S. Wright (CVL 49) commissioned at U.S. Naval Base, Philadelphia, Pa. Mrs. Harold S. Miller, niece of Wilbur, is sponsor.

**FEBRUARY 14.** In letter to Dr. Henry B. Allen, secretary of the Franklin Institute, Orville states that he has arranged for the Wright brothers' original airfoils and 1901 wind tunnel balances to become the property of the Franklin Institute, but to be retained by Orville for such time as he has a personal use for them.

**APRIL 8.** Orville pays tribute to Henry Ford, his friend of many years, on his death on April 7. Orville declares, "He did more to promote the welfare of the American people, and particularly the working class, than any man who ever lived in this country. The present great wealth of this country has come indirectly from Mr. Ford through his development of mass production."

**APRIL 9-10.** Orville attends funeral services held in Detroit for Henry Ford and is seated with the Ford family.

**MAY 3.** As a special guest Orville attends ceremonies on day honoring Col. and Mrs. Edward A. Deeds at Denison University, Granville, Ohio.

**JUNE 9.** Otterbein College, Westerville, Ohio, confers honorary doctor of science degree on Orville.

**JULY 7.** Orville, in interview, criticizes wide publicity given to reports of flying saucers and states that he believes "there is no scientific basis for the existence of this phenomenon."

**AUGUST 27.** Wright Field officials announce that a replica of an early Wright brothers' glider, carefully constructed under the supervision of Orville in the 1930's, apparently had been destroyed during World War II to provide needed space for the expanded labor force required during the war.

**SEPTEMBER 20.** Orville participates in Earlham College's centennial celebration, Richmond, Ind., and serves as honorary chairman of the college's "Second Century" building campaign.

**OCTOBER.** Gertrude Stein's *Four In America*, published posthumously, includes an essay on Wilbur Wright. Miss Stein's interest in Wilbur stemmed from seeing the monument erected in his honor in Le Mans.

**OCTOBER 10.** Orville suffers heart attack on way to meeting at National Cash Register Company in Dayton and is taken to Miami Valley Hospital. Following a brief stay he returns to his home on October 14.

**NOVEMBER 1.** Marble bust of Wilbur, the work of the Italian sculptor Pier Gabriele Vangelli and the gift of Italian airplane designer Cianni Caproni, unveiled in ceremony at Centocelle Airport, near Rome, where Wilbur first flew on April 15, 1909.

It was planned that reproductions of the bust would be given at a later date to the U.S. Air Force and to the City of Dayton.

**DECEMBER.** Louis P. Christman, under direction of Orville, commences preparation of set of drawings of Wright 1903 motor which he completes after Orville's death.

The drawings were subsequently given to the Smithsonian Institution by Educational and Musical Arts, Inc., which operated the Carillon Park Museum in Dayton which houses the restored 1905 Wright airplane.

**DECEMBER 7.** Orville visited by George Truman and Clifford Evans, private fliers, who stopped in Dayton on the final leg of their round-the-world flight.

**DECEMBER 23.** Wright No. 3 horizontal airplane motor, on loan to Edison Institute since April 1, 1938, returned to Orville in Dayton. In letter to Edison Institute on November 18, Orville, had stated, "The No. 3 motor was of no historical importance, since it was never used except for experimental purposes in the shop."

**DECEMBER 26.** Orville receives scroll, painted and prepared by Clayton Knight, from Air Service Post No. 50, American Legion, signed by prominent aviators attending Frank Hawks Memorial Trophy Award dinner in New York on December 17 commemorating Wright brothers' first flight.

## 1948

**JANUARY 27.** Orville enters Miami Valley Hospital in Dayton for treatment following second heart attack at his laboratory.

**JANUARY 30.** Orville, age 77, dies of heart attack at Miami Valley Hospital.

**FEBRUARY 1.** President and Mrs. Harry S. Truman are among those sending messages of sympathy to Wright family following death of Orville. Tributes to him are paid by his friends Charles F. Kettering, inventor, and Col. Edward A. Deeds, chairman of the board, National Cash Register Company, and by leading citizens, top-ranking officials at Wright Field, and representatives of the organizations in which he was active: Institute of the Aeronautical Sciences, National Advisory Committee for Aeronautics, and National Aeronautic Association.

**FEBRUARY 2.** Funeral services for Orville are conducted at the First Baptist Church in Dayton, of which he was a member, and he is eulogized by the pastor, Rev. Dr. Charles L. Seasholes, who, according to the Dayton Daily News, termed Mr. Wright a genius, yet "a man who was just one of folks like us—middle-class, mid-Western American, with simple, devout parents, and simple and modest way of life."

A large and distinguished group of persons pay homage and tribute to Orville at the funeral. Gen. Carl Spaatz, U.S. Air Force, heads a group of Washington officials attending the funeral, including Dr. Alexander Wetmore, secretary of the Smithsonian Institution, John F. Victory, secretary of the National Advisory Committee for Aeronautics, and Dr. Francis W. Reichelderfer, chief of the U.S. Weather Bureau. Burial is in Woodland Cemetery in Dayton in the family plot near his sister Katharine and his brother Wilbur.

**FEBRUARY 5.** Orville's will admitted to probate, and Harold S. Miller and Harold W. Steeper, both nephews by marriage, named as coexecutors of the estate.

The will provides that the original Wright airplane should remain in possession of the Science Museum, South Kensington, London, unless he had written to the museum before his death requesting its return. The Franklin Institute receives the original metal airfoils used by Wilbur and Orville in their wind tunnel research in 1901–1903. All of Orville's bronzes and all gold or other medals are willed to the Dayton Art Institute. All correspondence, files, and papers held by Orville at his death are to be turned over by the executors to such institution or institutions as they see fit. Oberlin College is bequeathed \$300,000. The major part of the residual estate is willed to surviving relatives and several former employees.

**FEBRUARY 18.** The coexecutors of the Orville Wright estate announce that in accordance with Orville's wishes the original Wright 1903 airplane deposited in the Science Museum in London will be returned to the United States and placed in the custody of the National Museum in Washington.

**FEBRUARY 20–23.** Orville's laboratory at 15 North Broadway in Dayton, where he conducted many of his experiments, is dismantled and equipment and machinery removed.

**APRIL 24.** Wright Skyway between Los Angeles and Washington dedicated and bronze tablet erected at Wright Field, Dayton, Ohio.

**SEPTEMBER 12–16.** Diary of Orville Wright, describing first successful flight in 1903, is shown publicly for the first time in Library of Congress exhibit commemorating Air Force Day and centennial of American Association for the Advancement of Science.

**SEPTEMBER 16.** Dayton probate court records reveal Orville leaves estate valued at \$1,023,903.

**OCTOBER 18.** In ceremony at the Science Museum, London, Wright 1903 airplane is removed from exhibit and handed over to Mr. Livingston Satterthwaite, American civil air attaché, who received it on behalf of the American government for return to the United States.

**NOVEMBER 11.** National Cash Register Company purchases Wright home in Dayton for \$75,000 and redecorates it as guest house for company's distinguished visitors but leaves Orville's library intact as a shrine to the Wright brothers.

**NOVEMBER 22.** Crated Wright 1903 airplane arrives at the Smithsonian Institution in Washington from England.

The airplane had been placed aboard the Mauretania, which, due to a strike, docked in Halifax. The plane was transferred to the Navy carrier Palau, which delivered it to Brooklyn, from whence it was transported to Washington by Navy truck.

**DECEMBER 15.** Orville Wright estate distributed.

**DECEMBER 17.** Formal presentation of the Wright brothers' 1903 airplane to the Smithsonian Institution following its return to America from the Science Museum in London, where

it had been exhibited since 1928, is made in the Arts and Industries Building of the National Museum. The ceremonies are opened by Dr. Alexander Wetmore, secretary, Smithsonian Institution. Greetings are extended by Chief Justice of the United States and Chancellor of the Smithsonian Institution Fred M. Vinson. A message from President Harry S. Truman is delivered by his Air Force aide, Col. Robert M. Landry. The Wright airplane is presented to the nation by Milton Wright, of Dayton, Ohio, nephew of Orville, on behalf of the estate of Orville Wright and accepted by Chief Justice Vinson. The formal acceptance address is delivered by Vice-President-Elect Alben W. Barkley, a regent of the Smithsonian. The British ambassador, Sir Oliver Franks, delivers a talk on "Britain and the Wright Brothers."

First presentation of the Wright Memorial Trophy, founded by Dr. Godfrey Lowell Cabot to be awarded annually by the National Aeronautic Association for "significant public service of enduring value to aviation in the United States," is made at dinner of the National Aeronautic Association in Washington. The trophy is a miniature silver replica of the Wright brothers' 1903 powered airplane mounted on replica of commemorative boulder at Kitty Hawk that marks takeoff point for the Wrights' first flights.

The recipient, Dr. William F. Durand, was unable to attend.

**DECEMBER 25.** Collier's publishes special commemorative section dedicated to the Wright brothers.

The issue included Orville's diary account of the December 17, 1903, first flight; "My Story of the Wright Brothers," by Charles E. Taylor, Wright mechanic; and a painting of the Wright brothers by Arthur Lidov from a portrait photograph by Hollinger & Company, 1907, donated by Orville to the Institute of the Aeronautical Sciences.

Melbourne Brindle presents his painting "The Kitty Hawk Plane," originally done for Collier's and reproduced in its December 25 issue, to the National Air Museum.

Group of heirs of the Orville Wright estate purchase the original Wright wind tunnel from the estate and present the tunnel to Miami University, Oxford, Ohio.

## 1949

**APRIL.** Wright brothers are honored in ceremony in Italy at Centocelle Airport in observance of the 40th anniversary of Wilbur's first flights there when training Italy's first military flier, Lt. Mario Calderara. Italian government represented by Manillo Zerbinati, president of Aero Club d'Italia, and Giovanni Pedace, secretary general of Pionieri dell'Aeronautica society; American Ambassador James C. Dunn accepts copy of bust of Wilbur unveiled at Centocelle November 1, 1947, for United States.

**MAY 27.** Wright Papers received in Library of Congress following shipment from Dayton in accordance with agreement between the executors of the Orville Wright estate, Harold S. Miller and Harold W. Steeper, and the Librarian of Congress, Luther H. Evans, executed on May 5, 1949.

Public announcement is made by the Library of Congress on June 5.

**JUNE 30.** Oberlin College establishes Wilbur-Orville Wright Memorial Fund in the Library of Congress to support the editing of the important scientific correspondence, technical writings, diaries, notebooks, and related papers of Wilbur and Orville deeded to the Library by the Orville Wright Estate.

Original Oberlin College-Library of Congress agreement somewhat altered by subsequent agreement executed June 5, 1952.

**DECEMBER 7.** In flight sponsored by the Air Force Association in commemoration of first Wright flight, Thomas G. Lanphier, Jr., wartime ace, carrying message from President Truman calling for use of air power as a force for peace, dated November 23, completes record-breaking round-the-world trip via regular scheduled commercial airlines from LaGuardia Airport, N.Y., and return.

**DECEMBER 17.** Commemorative six-cent airmail stamp honoring the Wright brothers is issued by the Post Office at Kitty Hawk, N.C. The Wright 1903 airplane is shown in flight.

## 1950

**JANUARY 27.** Bronze bust of Wilbur by Oskar J.W. Hansen presented to the Smithsonian Institution by Mr. and Mrs. Elmer F. Weiboldt of North Garden, Va.

**APRIL 17.** Max P. Baker, technical Advisor to the Orville Wright estate, presents paper entitled "The Wright Brothers as Aeronautical Engineers" at national aeronautic meeting of the Society of Automotive Engineers, New York, giving details on the Wrights' 1901 wind tunnel experiments.

The paper is subsequently published in SAE Quarterly Transactions, January 1951, with discussions entitled "Wright Brothers and Aerodynamics," by Francis H. Clauser; "Design, Structural Features of Wright Brothers Airplane," by Alexander Kartveli; and "Powerplants Built by Wright Brothers," by Opie Chenoweth.

**JUNE.** Original Wright 1905 airplane, the assembly and restoration of which had been started under the supervision of Orville before his death, is displayed to the public for the first time in a building specially constructed to house it in Carillon Park, Dayton.

Wilbur and Orville Wright Laboratory of Physics established at Oberlin College.

## 1951

**APRIL 25.** Reproduction of Wright 1903 airplane engine made by the De Havilland Technical School is presented to the Science Museum, South Kensington, London.

**JUNE 15.** *Miracle at Kitty Hawk: The Letters of Wilbur and Orville Wright*, edited and selected by Fred C. Kelly, published by Farrar, Straus and Young, New York.

The selected letters, fewer than 600, were written during the period April 1, 1881–October 9, 1946.

## 1952

**JUNE 5.** Library of Congress and Oberlin College execute new agreement, superseding that of June 30, 1949, for the publication of the Wright papers. The agreement provides for a two-volume chronological edition of all the papers relevant to the evolution of the airplane and the principles of flight discovered by the Wrights.

**NOVEMBER 12.** President Harry S. Truman writes letter to Thomas W. S. Davis, acting chairman, air coordinating committee, directing the air coordinating committee to make plans for observing the 50th anniversary of the Wright brothers' successful 1903 flight.

**DECEMBER 16.** Gov. Thomas E. Dewey proclaims year-long period of celebration in New York to mark golden anniversary of the first heavier-than-air flight by the Wright brothers.

## 1953

National Committee to Observe the 50th Anniversary of Powered Flight is organized, James H. Doolittle, chairman.

**FEBRUARY 3.** Indiana State Representative Clem Conway introduces H.J. Res. 15, designating the Wilbur Wright birthplace as a state memorial.

The resolution passes the House on February 8 and is signed by Ind. Governor George M. Craig on March 9.

**FEBRUARY 13.** Senator Pat McCarran, of Nevada, introduces S.J. Res. 42, providing for the proper participation of the U.S. government in a national year-long celebration, from December 17, 1952, to December 17, 1953.

A companion resolution, H.J. Res. 193, was introduced in the House on February 18 by Representative Carl Hinshaw, of California.

**MARCH 11.** Library of Congress announces availability of new improved print of the only photograph of the Wright brothers' first flight at Kitty Hawk, N.C., on December 17, 1903.

The print was made from the original glass-plate negative by the Library's Photoduplication Service with the aid of modern photographic equipment and techniques and shows details that were not visible in any known previous printing. The negative is one of 300 glass-plate negatives in the collection of Wilbur and Orville Wright materials given to the Library in 1949 by the Orville Wright estate.

**MARCH 25.** Representative Peter F. Mack, Jr., of Illinois, introduces H.R. 4217, providing for the issuance of a special airmail postage stamp in commemoration of the anniversary.

**APRIL 16.** Millville, Ind., residents observe Wilbur's birthday anniversary at gathering at his birthplace.

**MAY 22.** President Dwight D. Eisenhower signs Congressional resolution calling for "proper participation" by the federal government in a national celebration.

**MAY 29.** Commemorative six-cent airmail stamp issued by Post Office Department and placed on sale at Dayton, Ohio,

in conjunction with the convention and exhibition of the American Air Mail Society.

The central design of the stamp is a facsimile of the emblem created for the 50th Anniversary of Aviation, showing in silhouette the first Wright airplane and a modern plane in powered flight.

**JUNE 18.** Gov. William B. Ulmstead, of North Carolina, appoints North Carolina 50th Anniversary Commission to assist, cooperate, and participate in the appropriate observance of the golden anniversary.

**JULY.** Aero Digest publishes 50th anniversary of powered flight commemorative issue. Includes "Wright Brothers: World's First Aeronautical Engineers," by M. P. Baker; "Wright Flier," by Robert McLaren; and "Wright Chronology," by Arthur Renstrom.

**JULY 15.** Lt. Gen. James H. Doolittle dedicates a full-scale reproduction of the Wright brothers' 1903 airplane built cooperatively by 24 West Coast manufacturers and assembled by the Northrop Aeronautical Institute. The model is installed on permanent exhibition in the W. F. Durand Aeronautical Museum of the Institute of the Aeronautical Sciences (now American Institute of Aeronautics and Astronautics) in Los Angeles.

**OCTOBER 13.** Pioneers and leaders in aviation from Belgium, France, England, Germany, Holland, Brazil, Portugal, Canada, Mexico, and the United States, led by Adm. Richard E. Byrd, retrace steps of Wilbur and Orville to Kill Devil Hill, where they made their first successful flights.

**OCTOBER 25.** Italian fliers drop a laurel wreath from a helicopter on a bust of Wilbur Wright in front of the main air base building at Centocelle Air Base near Rome.

**NOVEMBER 2-8.** New York City Mayor Vincent R. Impelliteri designates first week in November as "50th Anniversary of Powered Flight Week," with daily ceremonies and events.

A daily air show is staged at the Battery, November 2-5, and at Mitchell Air Force Base on November 6-7. A Navy-built reproduction of the Wright 1903 airplane is displayed at Union Square.

**NOVEMBER 13.** Library of Congress opens exhibit on history of aviation, including photographs and selections from papers of the Wright brothers.

Dr. Jerome C. Hunsaker, professor of aeronautical engineering, Massachusetts Institute of Technology, professor of aeronautical engineering, Massachusetts Institute of Technology, speaks on a half-century of aviation development at the autumn general meeting of the American Philosophical Society in Philadelphia.

**DECEMBER.** Air Force magazine announces it is establishing Aviation Hall of Fame, with Wilbur and Orville as the two first nominations.

**DECEMBER 1.** Kill Devil Hills Monument National Memorial renamed Wright Brothers National Memorial.

**DECEMBER 3.** The Papers of Wilbur and Orville Wright published by McGraw-Hill Book Company.

The publication was sponsored by Oberlin College on the Wilbur-Orville Wright Memorial Fund and edited by Marvin W. McFarland and staff of the Aeronautics Division of the Library of Congress. It was based on the Wright papers deposited in the Library of Congress on May 27, 1949, by the Orville Wright estate. This work, long out of print, was reprinted and published by the Arno Press on June 23, 1972.

**DECEMBER 7.** Life publishes summary by Ernest Havemann of selected letters from The Papers of Wilbur and Orville Wright, dealing with their early flights, especially the flights of December 17, 1903. The account is accompanied by color reproduction of the painting by John T. McCoy, Jr., depicting the first flight.

**DECEMBER 10.** New York Public Library opens exhibit of materials covering 200,000,000 years of flight by insect, bird, and man in celebration of 50th anniversary of Wright brothers' flight.

**DECEMBER 14-17.** Nationwide celebration of 50th anniversary concludes with a four-day observance at Kill Devil Hill, sponsored by the Kill Devil Hills Memorial Society, the National Park Service, Air Force Association, and the North Carolina 50th Anniversary Commission.

**DECEMBER 14.** "Pioneers & Private Flyers Day" opens the Wright Brothers National Memorial exercises. Address of welcome is by Frank P. Lahm, President, Kill Devil Hills Memorial Society. Wreaths are placed on the memorial by representatives of Dare County and the Aircraft Owners and Pilots Association and the Civil Air Patrol stages memorial flight over the monument. The recently reconstructed Wright brothers' camp at Kill Devil Hills is dedicated, with address by Elbert Cox, regional director, National Park Service, and the Wright buildings opened to the public. A glider salute and flag and wreath ceremony is conducted by the Soaring Society of America.

**DECEMBER 15.** "Industry Day" at Kitty Hawk is observed by the placing of wreaths on the Wright memorial by representatives of the Air Transport Association and the Aircraft Industries Association. United States Marine Corps conducts memorial flight. United States, United Nations, and International Goodwill flags are raised in flag ceremony.

**DECEMBER 16.** "Defense Day" at Kitty Hawk is observed by placing of wreaths on the Wright Brothers National Memorial by representatives of the Chamber of Commerce of Elizabeth City, N.C., and the Air Force Association. U.S. Air Force stages memorial flight, followed by airpower fly-by by Marine Corps, Army, and Air Force and flight perfection display by the USAF Thunderbirds.

Dayton observes the anniversary by placing wreaths on the Wright Brothers Memorial in the presence of an honor guard from the military base, the Civil Air Patrol, the Ohio Air National Guard and reserve units, climaxed by a flying wreath formation of planes going over the memorial. In the evening a dinner is held at the Dayton Art Institute, at which Air Force Secretary Harold E. Talbert and Gen. Nathan F. Twining, Air Force Chief of Staff, are among the speakers.

**DECEMBER 17.** "Anniversary Day" concludes four-day exercises held at Wright Brothers National Memorial. U.S. Coast Guard conducts wreath flight and U.S. Navy a memorial flight. In re-enactment of first flight Billy Parker, of Philips Petroleum Co., in 1912 pusher plane flies over site where Orville Wright flew the first 120 feet in aviation's first 12 seconds. James H. Doolittle, chairman of National Committee to observe the 50th Anniversary of Powered Flight, and Representative Carl Hinshaw, chairman, Joint Congressional Committee, deliver addresses at Wright memorial luncheon at Nags Head, N.C.

Aero Club of Washington sponsors anniversary dinner at Statler Hotel in Washington attended by leaders in aviation and the aviation industry, at which President Dwight D. Eisenhower and radio entertainer Arthur Godfrey are among those paying tribute to the Wright brothers.

Representative Ralph Harvey, of Ind., delivers memorial address at ceremony in Millville, Ind., birthplace of Wilbur, in observance of golden anniversary of flight by Wright brothers.

Franklin Institute, in Philadelphia, opens exhibition of material deeded to it by Orville Wright, comprising all original wind-tunnel apparatus, model airfoils, test data, and drawings of the Wright brothers' early airplanes and engines, some airfoil models and aircraft models tested for the Wright Company at McCook Field during 1919, 1920, and 1921, as well as some of Orville's later experimental devices.

Dayton Art Institute opens six-week art exhibit entitled "Flight, Fantasy, Faith, Fact."

Exhibits included the institute's collection of medals, citations, and degrees conferred on the Wrights for their achievements.

## 1954

**NOVEMBER 26.** James G. Crowther includes the Wright brothers in his book *Six Great Inventors* (London, Hamish Hamilton, 1954), stating that "For the purpose of this book, the Wright brothers have been regarded as one composite inventive personality. Their achievement was the result of mutual inspiration and discussion, and their respective contributions cannot be separated."

**DECEMBER 17.** Bronze and granite marker unveiled on Governors Island by Early Birds to commemorate historic flights to and from Governors Island, the first by Wilbur on September 29, 1909. A bronze propeller cast from a wooden one used on the first military airplane built by the Wrights in 1909 is mounted on one side of the monument.

## 1955

**JANUARY 16.** CBS television program "You Are There" reconstructs events of December 17, 1903.

**FEBRUARY 9.** Orville Wright School, Dayton, Ohio, dedicated at ceremonies presided over by Mrs. Richard Fullerton, president, Orville Wright Parent-Teacher Association.

**NOVEMBER.** In poem published in *Atlantic Monthly* entitled "Kitty Hawk," Robert Frost pays tribute to Wright brothers.

**NOVEMBER 1.** Wilbur elected to Hall of Fame for Great Americans at New York University.

## 1957

**APRIL 10.** Ohio State Senators Lowell Fess and Theodore M. Gray introduce S. 23, to authorize the department of public works to direct the Ohio Historical Society to obtain a painting of the Wright brothers.

A painting by Dwight Mutchler was subsequently commissioned and installed in the Ohio State Capitol in Columbus on December 17, 1959.

**DECEMBER 17.** As part of the 54th anniversary ceremonies of the Wrights' first flight, Conrad L. Wirth, director of the National Park Service, breaks ground for the beginning of construction of a new visitor center at the Wright Brothers National Memorial at Kitty Hawk, N.C.

## 1958

**JULY 6.** Le Mans, France, commemorates Wilbur's first flight at the Hunaudières race course, near Le Mans, on August 8, 1908, and holds exhibit of memorabilia relating to this event.

**SEPTEMBER 3.** Department of the Army, Department of the Air Force, and Military District of Washington hold program commemorating 50th anniversary of first airplane flight from a military installation by Orville at Fort Myer, Va., and the first major air accident to military personnel, occurring on September 17, 1908. A monument is dedicated to Lt. Thomas E. Selfridge, who was killed in an accident on that date while a passenger with Orville.

## 1959

**MARCH 2.** Senator James E. Murray of Montana, introduces S. 1212, providing for revision of boundaries of Wright Brothers National Memorial at Kitty Hawk. Representative Herbert C. Bonner, of North Carolina, introduces companion bill, H.R. 5488, in House on March 10.

**AUGUST 31.** Representative Joseph W. Martin, Jr., of Massachusetts, introduces H.J. Res. 513, designating December 17, 1959, as "Wright Brothers Day." Resolution passes House September 3 and Senate September 9.

**SEPTEMBER 21.** President Dwight D. Eisenhower proclaims December 17, 1959, as "Wright Brothers Day."

**DECEMBER 17.** "Wilbur and Orville Wright and Their Accomplishments," by Dwight Mutchler, unveiled and dedicated in Columbus, Ohio. The oil painting was authorized by the Ohio General Assembly, May 1957, to be hung in the Ohio State Capitol Building.

## 1960

Orville is nominated for election to Hall of Fame for Great Americans at New York University.

**JANUARY 1.** Access to the Wright Papers in the Library of Congress, previously withheld by stipulation of deed of gift, granted to the general public.

**JANUARY 19.** Representative Martin, of Massachusetts, introduces H.J. Res. 559, designating the 17th day of December in each year as "Wright Brothers Day."

**MAY 17.** National Luchtvaart Museum, Schiphol Airport, Netherlands, opened to the public. A replica "Wright Flyer" is among aircraft displayed.

**DECEMBER 17.** Visitor Center and Administration Center at Wright Brothers National Memorial dedicated by National Park Service.

## 1961

**JANUARY 6.** Representative Martin introduces H.J. Res. 109, designating the 17th day of December, 1961, as "Wright Brothers Day."

## 1962

National Aviation Hall of Fame, Dayton, established October 6, 1962, names Orville and Wilbur Wright as first two recipients of National Aviation Hall of Fame Award.

## 1963

**MARCH 21.** Representative Martin introduces H.J. Res. 335, designating 17th day of December of each year as "Wright Brothers Day."

**MAY 3.** Charles H. Gibbs-Smith, aeronautical historian long associated with the Victoria and Albert Museum, London, delivers lecture on Wright brothers before Royal Institution of Great Britain. The substance of the lecture was subsequently published with title *The Wright Brothers: A Brief Account of Their Work, 1899–1911* (London, H.M.S.O., 1963; revised 1969).

**DECEMBER 17.** Bronze memorial plaque, the work of Capt. Ralph S. Barnaby, gift of the Soaring Society of America, honoring the Wright brothers, unveiled at Wright Brothers National Memorial, Kitty Hawk, N.C. The presentation is made by Floyd Sweet, past president of the Society. Plaque consists of the likenesses of Wilbur and Orville in bas-relief with the caption "They Taught Us To Fly." The gliders which the Wrights flew at Kitty Hawk in 1901, 1902, and 1911 are depicted on the background of the plaque.

House Joint Resolution 335, passed by House on October 7 and by the Senate on December 6, approved and proclaimed by President Lyndon B. Johnson, designating the 17th day of December of each year as "Wright Brothers Day."

Reproduction of the Wright original 1903 "Flyer," a project of the National Capital Section of the American Institute of Aeronautics and Astronautics, presented to the Wright National Memorial Museum at Kill Devil Hill.

## 1964

**APRIL 8.** Two oil portraits of Wilbur and Orville, painted by Efrem Melik, of New York, presented to National Air Museum, Smithsonian Institution, by Flight Safety Foundation, New York.

**AUGUST 20.** Representative Ralph Harvey, of Ind., introduces H.R. 12459, authorizing the establishment of the Wilbur Wright National Monument in the State of Ind.

**NOVEMBER 13.** President Lyndon B. Johnson proclaims December 17, 1964, as Wright Brothers Day.

## 1965

One-eighth scale model of Wright brothers' 1903 airplane presented to National Aviation Hall of Fame, Dayton, by Eugene Kettering, chairman of the Board of National Aviation Hall of Fame. Model is to be displayed in the James M. Cox Dayton Municipal Airport until completion of a National Aviation Hall of Fame building. Model is the work of Joseph D. Fallo, Air Force Museum, Wright-Patterson Air Force Base, Dayton, and is based on detailed drawings in the Air Force Museum of the Wright airplane prepared by Louis P. Christman.

**JUNE 21.** Orville is recommended as one of five nominees under consideration for election to Hall of Fame for Great Americans at New York University.

**OCTOBER 28.** Orville is elected to Hall of Fame for Great Americans at New York University.

## 1966

**JANUARY 31.** The U.S. Air Force: A Pictorial History in Art, by James J. Haggerty and Warren R. Smith, is published by Books, Inc., New York, reproducing three Wright paintings from the Air Force Art Collection: "The Wright Brothers' First Power Flight," by Harvey Kidder, "Lieutenant Lahm's First Flight (with Orville)," by Richard Green, and "The Wright Brothers at Fort Myer," by John McCoy.

**DECEMBER 17.** Wreaths are laid at foot of Wright Brothers Memorial at Kitty Hawk in observance of 63rd anniversary of Wright brothers' historic 1903 flight. A group of F-102 Delta Dagger aircraft fly over monument in salute.

## 1967

Wright State University, located northeast of the city of Dayton and named for the Wright brothers, established as a public, state-assisted general university, to be responsive to the needs of the Miami Valley, the State of Ohio, and the Dayton area.

**APRIL 10.** Representative Richard L. Roudebush, of Ind., introduces H.R. 8305, authorizing the Secretary of the Interior to accept and administer the birthplace of Wilbur Wright as a national monument.

**APRIL 16.** One-hundredth anniversary of birth of Wilbur.

**MAY 7.** Commemorative tablets and busts of Orville by Paul Fjelde and of Wilbur by Vincent Glinsky installed in the Hall of Fame for Great Americans at New York University. A Wright brothers medal designed by Paul Fjelde also is issued in commemoration of the event.

**DECEMBER 6.** President Lyndon B. Johnson proclaims December 17, 1967, as Wright Brothers Day.

**DECEMBER 17.** F-102 Dagger aircraft of the 196th Fighter Group, South Carolina National Guard, fly over Wright Brothers Memorial at Kitty Hawk in observance of 64th anniversary of Wright brothers' 1903 flights.

## 1968

**APRIL.** Library of Congress publishes Wilbur & Orville Wright: A Bibliography Commemorating the Hundredth Anniversary of the Birth of Wilbur Wright, April 16, 1867, listing more than 2,000 printed and audiovisual research materials on the Wright brothers.

**DECEMBER 16.** President Lyndon B. Johnson proclaims December 17, 1968, as Wright Brothers Day.

**DECEMBER 17.** Museum of antique aircraft, Wings and Wheels, Santee Exhibitions, Inc., opened at Santee, S.C., to mark 65th anniversary of Wright brothers' 1903 flight. Replica "Kitty Hawk Flyer" is among aircraft displayed.

## 1969

**DECEMBER 11.** President Richard M. Nixon proclaims December 17, 1969, as Wright Brothers Day.

## 1970

Aviation Hall of Fame, Dayton, commences project to develop mosaic reproduction of Wright brothers' first powered flight. The mosaic, 60 by 20 feet, is to consist of more than 163,000 one-inch square tiles manufactured in Italy. Each tile bears a symbol related to the history of flight. Accompanying the mural are two pylons, each two feet square and eight feet high. Each pylon is dedicated to one of the Wright brothers (Wilbur and Orville) and is surfaced with 6,800 portrait tiles. The mosaic is to be set into the lobby of the Dayton Convention and Exhibition Center. Unveiling is scheduled for December 15, 1972.

**DECEMBER 10.** President Richard M. Nixon proclaims December 17, 1970, as Wright Brothers Day.

## 1971

**JUNE 22.** World premiere showing of film "The Wright Brothers: Orville and Wilbur" at the American Film Institute Theatre in Washington.

The film was produced by Arthur and Evelyn Barron and Amanda C. Pope for the NET Playhouse Biography Series in cooperation with South Carolina Educational TV.

*AUGUST 19.* Centennial of birth of Orville is observed as National Aviation Day and with appropriate ceremonies in Dayton. At a commemorative luncheon Grover Leoning reminisces on his association with Orville and the Wright Company as an aeronautical engineer, 1913–1914, and Mrs. Ivonette Miller relates anecdotes revealing personal qualities of her uncles, Orville and Wilbur. Gen. Jack Merrell, of the Air Force Logistics Command, places a wreath at the Wright Memorial. Wreaths also are placed on the graves of the Wright brothers in Woodland Cemetery.



# FLIGHT LOG

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
<b>1900 Kitty Hawk, N.C. Wright 1900 Glider</b>						
Three different days	WW & OW		5–10 sec	2–3 ft		Wilbur arrived at Kitty Hawk, N.C., on September 13, followed by Orville on September 28, to commence active experiments with a fullsize glider of their own design. In the first experiments the Wrights sought to measure the lift, the drift, and the center of pressure of the glider and to calculate control and the lifting ability. William J. Tate, resident of Kitty Hawk, was present and assisted in many of their experiments. Relatively few precise flight data on the 1900 flights were recorded. Total time in the air was only about two minutes. However, these flights provided the Wrights with their first confirmation of their flight theories.
Oct 10				20 ft		The first day's experiments were attempted with a man aboard. Then the glider was flown as a kite, 2 to 4 hours each time
Oct 17						Glider flown as kite. Glider was upset by wind and wrecked on Hill of the Wreck. Three days were required for repairs.
Oct 18			30 ft	ca. 15-20 ft		Glider flown as kite.
<b>1901 Kitty Hawk, N.C. Wright 1901 Glider</b>						
Jul 27	1	WW		50 ft		Using a machine similar to that constructed for their 1900 experiment but with the area of the wings increased from 165 square feet to 290 square feet, the Wrights, returning to Kitty Hawk in 1901, broke all previous records for distance in gliding. Detailed and specific records of all the 1901 experiments were not maintained and the exact number of flights is not known. An estimated 50-100 flights were made, with the glider being tested in free gliding flights and as a kite, sometimes empty and sometimes loaded with a bag of sand. The flights ranged from about 20 feet to nearly 400 feet. Wilbur and Orville were assisted in their experiments by George A. Spratt, of Coatsville, Pa., and by Edward C. Huffaker, of Chuckey City, Tenn., both recommended by Octavo Chanute, who also spent a week at their camp and witnessed some of the their flights. The year's results were in general discouraging and not up to their expectations; but the trials demonstrated that some of the most widely accepted laws, those regarding the travel of the center of pressure and the pressures on airplane surfaces, based primarily on the calculations of Otto Lilienthal, were mostly, if not entirely, incorrect.
	2	WW		20 ft		
	3	WW		20 ft		About 17 gliders were made. It was not possible to get a free flight on many attempts. On the last flight the machine turned over.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	4	WW		40 ft		
	5	WW		50 ft		
	6	WW		ca. 300 ft		
	7	WW	18 sec	370 ft		
	8	WW	18 sec	300 ft		
	9	WW		250 ft		
	10	WW	19 sec	315 ft		Best glide of day.
Jul 29						Four attempted flights were unsuccessful. Glider subsequently flown as kite. One experiment conducted with man aboard.
Jul 30						Glider flown as kite.
Jul 31						Number of trials made. No free flights.
Aug 8						The records of August 8 and 9 are from the diary of Octave Chanute, who was present at the tests conducted on these days.
	1	WW	6.2 sec	147 ft		
	2	WW	4.3 sec	110 ft		
	3	WW	7.2 sec	137 ft		
	4	WW	5.1 sec	93 ft		
	5	WW	.7 sec			
	6	WW	12.1 sec	265 ft		
	7	WW	12.3 sec	265 ft		
	8	WW	10.7 sec			
	9	WW	12.5 sec	366 ft		
	10	WW	12.9 sec			
	11	WW		389 ft		
	12	WW	13.8 sec	325 ft		
	13	WW	12 sec	260 ft		
Aug 9						
	1	WW	13 sec	280 ft		Kite test also made.
	2	WW	9.5 sec	225 ft		
	3	WW	13.5 sec	225 ft		
	4	WW	14.5 sec	230 ft		
	5	WW	17.5 sec	280 ft		
Aug 13						
	1			150 ft		
	2			250 ft		
	3			200 ft		
	4			200 ft		

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Aug 14						Kite test and successful glides made.
Aug 15	1		5-1/4 sec	44 ft		Glides and kite test made.
	2		4-3/4 sec	33 ft		
Aug 16			7-1/3 sec	39-1/2 ft		Glides and kite test made.
Aug 17						Experiments for year 1901 terminated.

**1902 Kitty Hawk, N.C. Wright 1902 Glider**

On their third visit to Kitty Hawk, N.C., in 1902 the Wrights made 700-1,000 glides increasing their record for distance to 622-1/2 ft., for time to 26 seconds, and for angle of descent to 5 degrees for a glide of 156 ft. Orville has stated that the flights of 1902 demonstrated efficiency of their system of control for both longitudinal and lateral stability and also the fact that their tables of air pressure derived from their wind-tunnel tests would enable them to calculate in advance the performance of their flying machine.

Sep 19						Glider first flown as kite, then about 25 glides made, none entirely free. Daniel Tate assists brothers in glides on this and subsequent days.
Sep 20	1	WW	11 sec	ca. 200 ft		Nearly 50 glides made September 19 and 20.
	2	WW		140 ft		Wilbur made free glide.
Sep 22						Glider flown as kite.
Sep 23		OW		160 ft		Orville made first free flight. Altogether about 75 glides were made, varying in length from 150 to 225 ft and in duration from 10-12 seconds. Machine damaged in landing at end of day, requiring delay in experiments for several days to make necessary repairs.
Sep 29	1	OW	10-1/4 sec	150 ft		
	2	OW		198 ft		
	3	OW		216 ft		
	4	OW		25 ft		
	5	OW		40 ft		
	6	WW	6-1/2 sec	98 ft		
	7	WW		25 ft		
	8	WW		25 ft		
	9	WW		25 ft		
	10	WW	6-3/5 sec	90 ft		
	11	WW	6-2/5 sec	100 ft		
	12	WW	9 sec	140 ft		
	13	WW	8-3/5 sec	132 ft		

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	14	WW		123 ft		
	15	WW	7 sec	150 ft		
	16	WW	5-1/5 sec	112 ft		
	17	WW	8 sec	160 ft		
	18	WW	9-1/2 sec	150 ft		
	19	WW	9-1/4 sec	159 ft		
	20	WW	6 sec	120 ft		
	21	WW	13 sec	230 ft		
	22	WW	12-4/5 sec	212 ft		
	23	OW		180 ft		
	24	OW		111 ft		
	25	OW	5-1/4 sec	120 ft		

Sep 30

Lorin Wright, who arrived at Kitty Hawk on the morning of September 30, witnessed Wright gliding experiments carried out between this date and October 10.

1	OW		183 ft
2	OW	8-1/5 sec	191 ft
3	WW	7-2/5 sec	145 ft
4	WW	5 sec	78 ft
5	WW	5-1/4 sec	125 ft
6	WW	8 sec	150 ft
7	WW	7 sec	150 ft
8	WW	5-3/4 sec	132 ft
9	WW	25 ft per sec (ca. 6-1/2 sec)	162 ft

Oct 1

George A. Spratt arrived in afternoon and witnessed Wright gliding experiments between this date and October 17.

1	WW		101 ft
2	WW	7-1/5 sec	150 ft
3	WW	9-4/5 sec	180 ft
4	WW	3-3/5 sec	93 ft
5	WW	8-2/5 sec	165 ft
6	OW		129 ft
7	OW		133 ft
8	OW	8 sec	142 ft
9	OW		150 ft
10	OW	8-3/5 sec	162 ft

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	11	WW		310 ft		
	12	WW	ca. 25 sec	320 ft		
	13	OW	9 sec	183 ft		
	14	OW	5-1/4 sec	123 ft		
	15	OW	9-1/4 sec	176 ft		
	16	OW	9-1/2 sec	202 ft		
	17	WW	11-4/5 sec	226 ft		
	18	WW		312 ft		
	19	WW		238 ft		
	20	WW	18 sec	287 ft		
	21	OW	7 sec	156 ft		
	22	WW	11-1/2 sec	205 ft		
	23	WW	10-1/5 sec	210 ft		
	24	OW	7 sec	156 ft		
Oct 2						Only a partial record of glides was kept.
	1	WW	16 sec	252 ft		
	2	WW	22 sec	328 ft		
	3	WW		320 ft		
	4	WW		351 ft		
	5	OW		217 ft		
	6	OW		216 ft		
	7	WW	24-1/2 sec	506 ft		
	8	WW	24-1/2 sec	504 ft		
	9	WW	23-1/2 sec	550 ft		
Oct 3						No records were maintained for glides made in the morning and only a few for those made in the afternoon.
	1	OW		279 ft		
	2	OW	14-1/4 sec	315 ft		
	3	WW	12-1/5 sec	189 ft		
	4	WW		318 ft		
	5	WW	8 sec	168 ft		
	6	WW	13-1/4 sec	255 ft		
Oct 8						Octave Chanute and Augustus M. Herring, who had arrived at Kitty Hawk on October 5, were present at glides made on October 8, 9, and 10.
	1	WW	3 sec	45 ft		
	2	WW	12 sec	180 ft		
	3	WW	9-1/2 sec	180 ft		
	4	WW	10-1/4 sec	135 ft		

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	5	WW	11-2/5 sec	225 ft		
	6	WW	12-4/5 sec	235 ft		
	7	WW		short glide		
	8	WW	13-1/5 sec	237 ft		
	9	WW		short glide		
	10	WW	9-2/5 sec	162 ft		
	11	OW	8-2/5 sec	148 ft		
	12	OW	8-1/2 sec	151 ft		
	13	OW	9-3/5 sec	170 ft		
	14	OW	9 sec	165 ft		
	15	OW	7 sec	160 ft		
	16	OW	6 sec	155 ft		
Oct 9						
	1		6-1/2 sec	ca. 110 ft		
	2	OW	6 sec	120 ft		
Oct 10					Many glides were undertaken on this date, but there are no available data on the time and distance of the glides. The first photograph of a Wright glide in a turn was taken on this date.	
Oct 15					Several attempts at gliding were made in the morning and two flights were made after dinner.	
Oct 17					Data unavailable on glides made on this date, but Orville did most of gliding before dinner and Wilbur made five or six glides after dinner for the purpose of obtaining pictures.	
Oct 20						
	1	OW		360 ft		
	2	WW		300 ft		
	3	OW		335 ft		
	4	WW		300 ft		
	5	OW	12 sec	300 ft		
	6	WW	21-4/5 sec	551 ft		
	7	WW	24-4/5 sec	552 ft		
	8	WW	24-1/2 sec	525 ft		
	9	WW	22 sec	548 ft		
	10	OW	24-1/4 sec	505 ft		
	11	OW	18 sec	406-1/2 ft		
	12	OW	16-1/2 sec	335 ft		

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Oct 21						
	1	WW	13-1/5 sec	150 ft		
	2	OW	10 sec	63 ft		
Oct 23						
	1	WW		short glide		
	2	OW	15-1/2 sec	336 ft		
	3	WW	17 sec	351 ft		
	4	OW	16-1/4 sec	426 ft		
	5	WW	18-3/5 sec	394 ft		
	6	OW	16 sec	380 ft		
	7	WW	17 sec	418 ft		
	8	OW		short glide		
	9	WW	26 sec	622-1/2 ft		This glide set a new duration and distance record.
	10	OW	24 sec	540 ft		
	11	WW	24-1/5 sec	540 ft		
	12	OW		509 ft		
	13	OW	21-2/5 sec	615-1/2 ft		
Oct 24		OW		255-1/2 ft		Glides on this date averaged about 200 ft A number of glides were witnessed by passengers aboard a steamer cruising nearby. In the last 10 days of practice Wilbur and Orville made more glides than in all the preceding weeks. In two days they made about 250 glides in winds ranging from 9-16-3/4 meters per second.
<b>1903 Kitty Hawk, N.C. Wright 1902 Glider, Sept. 28–Nov. 12 Wright 1903 Machine, Dec. 12–17</b>						
Sep 28						
	1	WW	30-2/5 sec			
	2	WW	26-2/5 sec	52 ft		
Oct 3						
	1	WW	43 sec	ca. 450 ft		
	2	OW	34-1/2 sec	ca. 450 ft		

Following their gliding experiments of 1900, 1901, 1902, Wrights returned to Kitty Hawk for the fourth time, arriving September 25, to attempt to fly a larger and improved biplane, which they had designed and to which they added a small gasoline motor with two pusher type propellers. Airplane parts and engine arrived at Kitty Hawk October 8, were assembled and ready for testing November 5, and first trial occurred December 12.

Wrights made between 60–100 glides during the day, using the 1902 glider which had been left in the Wright camp when Wilbur and Orville departed in 1902. Approximately 12 to 15 glides exceeded 26 seconds. Average of all glides was more than 20 seconds.

1 WW 30-2/5 sec  
2 WW 26-2/5 sec 52 ft

About 30 or 40 glides made. Five or six glides ranged from 32 to 35 seconds. Performance of the glider was improved by changes made in the vertical rudder and the twisting of the wings.

1 WW 43 sec ca. 450 ft  
2 OW 34-1/2 sec ca. 450 ft

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Oct 5						About a dozen glides were made from a steep incline. Glides ranged from 10 to 15 seconds each. Distance traveled was between 75 to 100 ft.
Oct 8						Few glides made.
Oct 10						Wilbur and Orville each made two glides. In Orville's last glide a strong gust of wind forced him rapidly up, and in coming down glider broke at one end and struck Wilbur on head.
Oct 19						
	1	OW	26-3/5 sec	520 ft		Six or seven glides were made.
	2	WW	21-3/5 sec	558 ft		
	3	OW	21-3/5 sec	603 ft		
	4	WW	20-2/5 sec	491 ft		
Oct 20						Wilbur and Orville each made a glide from Big Hill. Subsequently they made about 25 or 30 glides of about 9 seconds each from Small Hill.
	1	OW				
	2	WW				
Oct 21						Wrights made 15 to 20 glides. Five glides in morning averaged 400 feet. Later glides ran from 30 to 43 seconds, and the final 8 to 10 glides each increased in time and set new records. Many of the glides were made at heights from 40 to 60 feet, highest attained to date.
	1	WW	43-3/5 sec			
	2	OW	43-3/4 sec			
	3	OW	45 sec			
	4	WW	45-2/5 sec			
	5	OW	49 sec			
	6	WW	56 sec			
	7	OW	56-3/5 sec			
	8	OW	1 min 1/2 sec			
	9	WW	59 sec			
Oct 26						About 20 gliding attempts made. Former time record of 1 minute 1/2 second, made on October 21, was exceeded six times. Glides covered a distance of from 450 to 500 feet. Some glides reached an altitude of 60 feet. Gliding experiments, October 26-27, were witnessed by George A. Spratt, who had arrived at Kitty Hawk on October 23. He departed on November 6.
	1	OW	1 min 5-1/2 sec			
	2	WW	1 min 4-1/5 sec			
	3	WW	1 min 7-3/5 sec			

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	4	WW	1 min 7-2/5 sec			
	5	OW	1 min 11-4/5 sec			
	6	WW	1 min 9-1/2 sec			
Oct 27						Several glides were made by Wilbur and Orville, primarily for purposes of taking pictures. Height of glides not over 20 to 25 feet.
Nov 7						Four or five glides were made. Further glides not attempted because of irregular speed and direction of wind. Octave Chanute, who had arrived at Kitty Hawk on November 6, witnessed glides on this day.
Nov 12						Glider used to test starting truck and rails for the new 1903 machine, starting successfully five times out of six. After four or five glides were made, machine was returned to camp because the dilapidated condition of the machine rendered it unsafe for further experiments.
Dec 12						New Wright machine ready for trial, but there was insufficient wind. Machine was run along track, and in 40-ft run last 15 feet covered in 1-1/2 sec
Dec 14		WW	3-1/2 sec	105 ft	ca. 15 ft	In first trial machine plunged to ground immediately after takeoff and was damaged in landing—one front skid, front rudder, and rudder frame broken, requiring two days' time for repairs. Five men (Robert Westcott, John T. Daniels, Thomas Beacham, W.S. Dough, and Benny O'Neal) from the Kill Devil Life Saving Station were present at the trial.
Dec 17	1	OW	ca. 12 sec	120 ft	ca. 8-10 ft	The four flights were witnessed by John T. Daniels, W. S. Dough, and A. D. Etheridge, from the Kill Devil Life Saving Station. W. C. Brinkley of Manteo, and Johnny Moore from Nags Head. In an article entitled "How We Made the First Flight" in Flying December 1913, Orville described this flight as "the first in the history of the world in which a machine carrying a man had raised itself by its own power into the air in full flight, had sailed forward without reduction of speed and had finally landed at a point as high as that from which it started."
	2	WW	ca. 12 sec	ca. 175 ft		
	3	OW	ca. 15 sec	ca. 200 ft	ca. 12-14 ft	
	4	WW	59 sec	852 ft		Elevator damaged on landing. Shortly after, at camp, the machine was overturned by a gust of wind and wrecked, preventing further flights.

**1904 Huffman Prairie, Simms Station, Dayton, Ohio Wright 1904 Machine**

At Huffman Prairie, at a field of 100 acres located about 8 miles from Dayton, the Wrights made 105 starts, the total flying time being about 50 minutes, enabling them to practice controlling and maneuvering their powered machine. The 1904 machine was similar in dimensions to the machine of 1903. The weight was increased and a new power plant was added similar to the 1903 motor but having

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
						a 1/8-inch large bore. Modifications were introduced during the year as experiments progressed and changes were deemed desirable to improve the performance of the machine.
May 26		OW		ca. 25 ft	ca. 6-8 ft	Several pine spars were broken in landing, requiring postponement of further flights until repairs were made. The start of this flight was witnessed by Bishop Milton Wright, John G. Feight, Mr. and Mrs. Frank B. Hale, Mrs. William Werthner, a press reporter, and several others. Rain and lack of wind prevented attempted flights on May 23 and May 25.
Jun 10		WW		ca. 60 ft		Machine struck ground because of faulty steering. Machine was damaged, preventing further trials until repairs were made.
Jun 21						
	1			ca. 100 ft		
	2			ca. 100 ft		
	3	OW		225 ft		
Jun 23						
	1			264 ft		
	2					Tail damaged in landing.
Jun 25						Machine struck ground while turning at full speed and was damaged, preventing further trials until repairs were made.
July						Two trials made.
Aug 2						No systematic flight records were kept for 1904 by the Wrights before this date. The first flight on this date is recorded in Wilbur Wright's Diary E as No. 14 for the year.
	1	WW		160 ft		
	2	WW		370 ft		End bow broken when machine landed near fence.
Aug 4						
	1		10-2/5 sec (down track)	195 ft		
	2		20 sec (from start on track)	272 ft		
Aug 5						
	1	OW	4-3/4 sec	60 ft		236-ft track used.
	2	OW	2-3/4 sec (last 80 ft on track)	356 ft		
Aug 6						
	1	WW	8-1/4 sec (down track)	600 ft		145-ft track used.
	2	OW	7-3/4 sec	235 m		
	3	WW	17-3/5 sec	210 m		
Aug 8	1	WW				Wing struck ground before leaving track.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Aug 10						
	1	OW	17-2/5 sec	205 m		145-ft track used.
	2	WW	20-3/5 sec	640 ft		Rudder and propeller broken.
Aug 13						195-ft track used.
	1	OW		200 ft		
	2	WW	50-2/5 sec	705 m		
	3	OW	26 sec	425 m		
	4	WW	32-2/5 sec	475 m		
Aug 16	1	OW		432 ft		160-ft track used. Machine turned downward and was damaged when it landed on front rudder, breaking support.
Aug 22						160-ft track used on first three flights.
	1	WW		400 ft		
	2	OW	44 sec	635 ft		
	3	WW	7 sec	175 ft		
	4	WW	48-1/2 sec	630 ft		195-ft track used.
Aug 23						
	1	OW	30-2/5 sec	525 m		Katherine Wright witnessed flight.
	2	WW	15-3/5 sec	160 m		
Aug 24						
	1	WW	39-1/5 sec	530 m		145-ft track used. Machine was overturned and rudder frame broken when struck by gust of wind. Orville suffered body bruises and injured hand.
	2	OW	7-1/2 sec	201 ft		
Sep 7						
	1		9 sec	89 m		Catapult starting device first used on this date to aid in takeoff on their limited flying field and to make them more independent of weather conditions. Flight witnessed by Katharine Wright and Melba Silliman.
	2		7 sec	200 ft		
	3	WW	39-1/4 sec	610 m		
Sep 9						
	1		8-4/5 sec	79 m		
	2	WW	13-3/4 sec	496 ft		
	3	WW	18 sec	205 m		
Sep 13						
	1	WW	10-4/5 sec	140 m		
	2	WW	12-3/5 sec	135 m		
Sep 14	1	WW	23-2/5 sec	370 m		
Sep 15						
	1	WW	59-3/5 sec	845 m		First turn in air made, Wilbur making half circle.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	2	WW	54 sec	835 m		
Sep 20						
	1	WW	1 min 5-3/5 sec	1005 m		
	2	WW	1 min	1505 m	35-4/5 sec	A complete circle was made for the first time. Flight witnessed by A. I. Root of Medina, Ohio, and Wright mechanic Charles E. Taylor.
Sep 26						
	1	OW	8 sec	70 m		
	2	OW	29-1/5 sec	375 m		
Sep 27						
	1	OW	18-3/5 sec	209 m		
	2	OW	11 sec	105 m		
	3	OW	8 sec	75 m		
Sep 28						
	1	OW	6-3/5 sec	56 m		
	2	WW	12 sec	115 m		
Sep 30	1	OW	36 sec	565 m		Mr. Harshmann and Mr. Miller witnessed flight.
Oct 1						
	1	OW	56 sec	810 m		
	2	OW	55 sec	870 m		Wing tip of machine touched ground and skidded and front rudder struts were broken.
Oct 4						
	1	OW	12-1/2 sec	440 ft		
	2	OW	45-2/5 sec	681 m		
Oct 11	1	OW	1 min 6 sec	1010 m		
Oct 13						
	1	OW				No start.
	2	OW	59 sec	850 m (?)		
Oct 14						
	1	OW	1 min 22-1/4 sec	1,220 m		
	2	OW	1 min 38 sec	1,505 m		
	3	WW	1 min 27-3/5 sec	1,495 m		
Oct 15	1	OW	23-4/5 sec	420 m		Flight made in presence of Octave Chanute. Machine landed at speed of 45 to 50 miles an hour, skewed around, and was damaged requiring extensive repairs.
Oct 26	1	WW	34 sec	465 m		Machine struck ground, breaking upper spar, skids, and propeller.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Nov 2	1	OW	1 min 26-2/5 sec	1,290 m		Four other Wright trials on this date were unsuccessful. Tail broken at start of fifth trial.
Nov 3	1	WW	1 min 27-2/5 sec	1,325 m		Two prior trials were unsuccessful. Wing struck ground, breaking propellers and tear lower spar.
Nov 9						
	1	OW	18 sec	255 m		Second flight was best and longest of the year, witnessed by Brown and Reed of the Dayton, Springfield & Urbana Railway Co.
	2	WW	5 min 4 sec			Almost four rounds of field.
	3	OW	11-2/5 sec	115 m		
Nov 16						
	1	OW	56-4/5 sec	820 m		
	2	OW	40-1/5 sec	535 m		
	3	OW	19-1/4 sec	650 ft (over ground)		
	4	WW	3 min 10-3/4 sec	2-1/4 rounds of field		
Nov 22	1			150-200 ft		Five starts were unsuccessful due to improper gasoline regulation. Charles W. Furnas and Amos I. Root were among the witnesses.
Nov 25						
	1	OW	25-1/5 sec	335 m		
	2	WW	45-3/5 sec	635 m		
	3	OW	45-2/5 sec	690 m		
	4	WW	59 sec	840 m		
	5	OW	1 min 3 sec	890 m		
Dec 1						
	1	OW				Unsuccessful start.
	2	OW	8-4/5 sec	85 m		
	3	OW	5 min 8 sec (?)	4,515 m		
Dec 5	1	WW				Flight terminated after propeller was broken to pieces when it struck truck shortly after machine left track.
Dec 6	1	WW				Gasoline shut off by mistake.
Dec 7	1	WW	7-1/5 sec	100 m		
Dec 9						
	1	WW				Gasoline shut off by mistake.
	2	WW				Front rudder broken.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
1905 Huffman Prairie, Simms Station, Dayton, Ohio Wright 1905 Machine						
						A total of 50 flights were made during the year, with a total flying time of about 3 hours 40 minutes. The Wrights successfully achieved banking, turning, and circling and made figures of eight. The flights were made over a circular course of about three-fourths of a mile to the lap. The design of the 1905 machine was similar to that of the 1903 and 1904 machines. The horizontal control and rudder areas were enlarged and the whole structure increased in strength. Modifications were introduced in the course of year's experiments, including three different sets of propellers, the "bent end" type proving most successful.
Jun 23	1	OW	9-1/2 sec	272 ft		Left wing was struck in landing, and four ribs were cracked at rear left corner.
Jun 24	1	WW	5-9/10 sec	160 ft		
	2	OW				Pilot scraped right wing tip all the way down the track and failed to get a start.
	3	WW	3-1/2 sec	136 ft		Machine suddenly turned to left and struck left wing tip. Rear spar of left lower wing was broken and end bow was cracked.
Jun 30						On last flight, machine dropped very hard when power was shut off by mistake, breaking rear center and front center spar and two uprights. Engine was torn loose and several wires were broken. Further experiments were delayed for two weeks.
	1	OW	6-3/5 sec	240 ft		
	2	WW	3 sec	96 ft		
	3	OW	13-1/2 sec	664 ft		
	4	WW	19-1/2 sec	744 ft		
Jul 14	1	OW	ca. 12 sec	568 ft		Machine damaged in landing when it suddenly turned downward, breaking front skids, front rudder, upper front spar and about a dozen ribs, and lower front spar and one upright. Orville was thrown out through the broken top surface but suffered no injury. Repairs and heavy rains delayed further experiments several weeks.
Aug 24	1	WW	31-3/5 sec	480 m		
	2	WW				Speed insufficient to get start.
	3	WW	45-3/5 sec	690 m		
Aug 28	1	WW	31 sec	505 m		
	2	WW	49-4/5 sec	841 m		Rear ends of skids broken in landing.
	3	WW	1 min 184/5 sec	1,250 m		Complete circle made and landing made at starting point. George Feight and six farmer witnessed the flight.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Aug 30	1	OW	12 sec	170 m		Rear end of four ribs broken in landing.
Aug 31						Flight witnessed by Torrence Huffman and three children and by Alfred W. Morley and two daughters.
	1	WW	1 min 5-1/5 sec	1041 m		
	2	WW	34-3/5 sec	543 m		
	3	OW	14-4/5 sec	95 m		
Sep 6						
	1	OW	40-1/5 sec	620 m		
	2	OW	4 min 54 sec	4,730 m		Field was circled 4 times, and landing was made at starting point.
Sep 7						
	1	OW	52-1/2 sec	756 m		
	2	OW	2 min 48-3/5 sec	2,700 m		Two complete circles of field were made.
	3	WW	4 min 45-3/5 sec	4,751 m		
Sep 8	1	OW	2 min 46-1/5 sec			One complete circle of the field and a figure eight were made.
Sep 9						
	1	OW	9 sec	80 m		
	2	WW	10-2/5 sec	105 m		
Sep 12						"Little Jokers" (small surfaces resembling an elevator) were mounted on the propeller tips to reduce their pitch.
	1	WW	4 min 19-3/4 sec	3,900 m (3-1/2 circles of field)		
	2	WW	2 min 26-3/4 sec	2,310 m		
	3	WW	5 min 31 sec	5,056 m		
Sep 14						
	1	OW	31 sec	475 m		
	2	OW	4 min 23-2/5 sec	4,146 m		More than three circles of field were made.
Sep 15						
	1	OW	1 min 10-3/4 sec	1,161 m		
	2	OW	2 min 34 sec	2,270 m		Flight witnessed by Ivonette and Lorin Wright.
Sep 25	1	WW	7 sec	65 m		
Sep 26	1	WW	18 min 11-2/5 sec	17,961 m (11-1/8 miles)		Approximately 16 circles of the field were made. Flight ended when fuel was exhausted. Bishop Wright present.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Sep 27						
	1	WW		90 m		Bishop Wright and Lorin, Ivonette, and Horace Wright witnessed flights.
	2	WW	3 min 11-1/2 sec	3,061 m		
Sep 28	1	OW	9 min 44 sec	9,441 m		A little more than eight rounds of the field were made. The flight is a memorable one because the Wrights at that time became more acutely aware that a more skillful operation of the machine, i.e., tilting the machine forward a little to restore the flying speed, would help prevent stalling.
Sep 29						
	1	WW	1 min 33-2/5 sec	1,451 m		
	2	OW	19 min 56 sec	19,570 m (12 miles)		Fourteen circles of the field were made. Flight ended when fuel was exhausted. Torrence Huffman witnessed the flight.
Sep 30						
	1	OW	4 min 19-4/5 sec	4,325 m		Flight witnessed by Mr. Dornbusch.
	2	OW	17 min 15-1/2 sec	12 rounds of field		Flight witnessed by Lorin Wright, his son Milton, William Fouts, and William Weber.
Oct 3						
	1	WW	2 min			
	2	OW	26 min 11-1/5 sec	24,535 m (15-1/4 miles)		Flight witnessed by William Fouts, Frank Hamberger, O. F. Jamieson, and Howard M. Myers.
	3					Machine flown from flying field to shed.
Oct 4	1	OW	33 min 17 sec	33,456 m (20-3/4 miles)	ca. 40-60 ft	Flight witnessed by Charles Webbert, Henry Webbert, C.S. Billman, Mrs. Salts, Ruth Salts, William H. Shank, Bernard H. Lambers, William Webbert, Katherine Wright, and Bishop Wright.
Oct 5						
	1	WW	40-3/5 sec	630 m		
	2	WW	59 min 23-4/5 sec	38,956 m (24-1/5 miles)		This flight was the best of the year and longer than the 105 flights of 1904 together. Flight covered about 30 rounds of the field. Flight ended when fuel was exhausted. Witnesses included Edgar W. Ellis, Theodore Waddell, Torrence Huffman, William C. Fouts, and about a dozen others including Bishop Wright and David Beard, of the Dayton Journal.
Oct 16	1	WW	1 min 4-3/5 sec	970 m (one circle of field)		Late start prevented extended flight.

#### 1908 Kitty Hawk, N.C. Modified Wright 1905 Machine

The Wrights, having done no flying since October 1905, came to Kitty Hawk, Wilbur arriving on April 9 and Orville and the machine on April 25, to do some practice flying before undertaking the official U.S. government trials in Washington and the fulfillment of a contract

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
						with Lazare Weiller in France. Twenty-two flights were made between May 6 and May 14. The 1905 Wright machine used was altered so that the operator and one passenger could sit upright on the lower wing surface. The 1908 flights were witnessed by the men of Kill Devil Hill Life Saving Station, by a number of newspapermen, and by a few persons who were hunting and fishing in the vicinity.
May 6	1	WW	22 sec	1,008 ft		
May 8						In his Diary T. Wilbur states "We made nine flights in the morning, and two in the afternoon."
	1	OW	31 sec	ca. 945 ft		
	2	WW	59-1/2 sec	ca. 2,230 ft		
	3	OW	6 sec	23 m		
	4	OW	8-1/4 sec			
	5	WW				Machine scraped along ground and did not attain flight.
	6	WW				Machine again scraped ground, did not attain flight.
	7	OW	11-3/4 sec	69 m		
	8	WW	10-2/5 sec	68 m		
	9	OW	8-1/2 sec	22 m		
	10	WW	6-3/4 sec	47 m		
	11	WW	6 sec	25 m		
May 11						Wright flights of May 11, 13, 14 witnessed from distance by D. Bruce Salley, freelance reporter; Byron R. Newton of the New York <i>Herald</i> ; and William Hoster of New York <i>American</i> .
	1	OW	71 sec	1,280 m		
	2	WW	2 min 31 sec	2,989 m		
	3	OW	2 min 11 sec	2,515 m		
May 13						Reporters viewing flights on May 11 were joined by P. H. McGowan of the London Daily Mail, Arthur Ruhl, writer, and James H. Hare, photographer for Collier's Weekly, who witnessed flights of May 13 and May 14 and made a photograph from a distance which was published in Collier's, May 30, the first picture ever published of an airplane in flight.
	1	WW	50-4/5 sec	1,051 m		
	2	OW	2 min 44-1/4 sec	3,065 m		
	3	WW	2 min 39-3/4 sec	ca. 2,000 m (complete circle made)		
	4	OW	3 min 20 sec	3,881 m (complete circle made)		

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
May 14						
	1	WW	28-3/5 sec	600 m		Charles W. Furnas, mechanic, from Dayton, who had arrived at Kitty Hawk on April 15 to assist Wrights in their flights, was a passenger, the first carried by the Wrights.
	2	OW	4 min 2-2/5 sec	4,120 m		A complete circle was made and landing was near starting point. Charles Furnas again passenger with Orville. Three subsequent attempts by Wilbur were unsuccessful.
	3	WW	7 min 29 sec	8,120 m		Machine plunged into the ground when traveling at a speed of about 141 miles an hour and was badly damaged. Flights were then discontinued. Wilbur suffered slight injuries.

#### 1908 Hunaudières Race Course, Le Mans, France Wright 1907 Machine

						Wilbur had arrived in France on May 29 to five a satisfactory demonstration of the Wright machine in fulfillment of the duration and speed requirements of a contract made on March 3 with Henri Deutsch de la Meurthe, representing a French syndicate. Built in 1907, the machine he used was designed to permit two to sit upright on the lower wing surface, had a skid undercarriage, and required derrick-and-rail launching. The race course, located 5 miles south of Le Mans, was 800 meters long and 300 meters wide.
Aug 8	1	WW	1 min 45 sec	2 rounds of field	ca. 10 m (30-35 ft)	Witnesses of the flights, the first public flight by the Wright brothers, included Ernest Archdeacon, Hart O. Berg, Leon Bollee, Louis Bleriot, Francois Peyrey, Rene Gasnier, Ernest Zens, Paul Zens, Pierre Gasnier, Robert Guerin, Capt. Alexandre Sazerac de Forge, Count Henri de Moy, and two Russian officers. A tick control was used by the Wrights for the first time. Wilber was assisted on the takeoff by Hare O. Berg's chauffeur, Fleury, who held right wing in balance until accelerating speed of machine left him behind.
Aug 10						Witnesses of the flights included Leon Delagrange, Frank S. Lahm, Count Henry de La Valette, Mr. and Mrs. Leo Stern, Mr. and Mrs. Albert Omer-Decugis, Paul Rousseau, Frantz Reichel, A. Wimille, Stephane Drzewiecki, Pierre Gasnier, Ernest Zens, Paul Zens, and representatives of Parisian and American newspapers. The number of spectators was estimated at 2,000.
	1	WW	42 sec	3/4 of circle		
	2	WW	1 min 41 sec	2 large figure eights	ca. 10-12 m	
Aug 11	1	WW	3 min 43 sec	more than 4 k (field circled three times)	2-20 m	Flight witnessed by Frank S. Lahm and James C. McCoy, American aeronaut. Estimated 3,000 spectators present.
Aug 12	1	WW	6 min 56-2/5 sec	7-8k (6 times around the course)	15 m	Spectators included the Misses Anne Pierpont Morgan, Elizabeth Marbury, and Bertha Murray, daughter of a London publisher, Henry Kapferer, and two German officers.
	2	WW	40 sec		20 m	

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	3	WW	1 min 44 sec		20 m	
Aug 13						
	1	WW	8 min 13-2/5 sec	Circled field seven times. 20 m		Flights witnessed by Hart O. Berg, Leon Bollee, Lt. Mario Calderara, Commander Borrel, Edouard Surcouf, Henry Kapferer, and Robert Guerin. Machine damaged in landing, spars, ribs and one skid runner being broken.
	2	WW	2 min 20 sec	field circled twice	30 m	Because of necessary repairs flying was not resumed until August 21 at a new field near Le Mans.
<b>1908 Camp d'Auvours, Le Mans, France Wright 1907 Machine</b>						
						Wilbur seeking an enlarged and better flying field moved to Camp d'Auvours, French artillery testing grounds, 11 kilometers east of Le Mans. The field was one-half kilometer wide and extended for five to six kilometers without obstruction.
Aug 21						To minimize crowds, only holders of special cards signed by the military commander and Hart O. Berg were permitted to enter grounds. Several German military experts witnessed flights. Following this date further flights were delayed by stormy weather and high winds.
	1	WW	1 min 49-1/5 sec	2 k 200 m	8 m	
	2	WW	2 min 14 sec	3-1/2 k	30 m	
Aug 31	1	WW	56 sec			Plane failed to attain altitude and was damaged in landing.
Sep 3						A large figure eight completed.
	1	WW	10 min 40 sec	ca. 11 k	15-20 m	Flights were timed officially by Leon Bollee, Paul Jamin, and Baron R. de Sennevoy, all of the Aero-Club de la Sarthe.
	2	WW		300-400 m		Machine did not rise due to insufficient engine power.
Sep 4	1	WW	2 min 13 sec	2.5 k	5 m	Flight witnessed by about 1,000 spectators, including representative of Aero-Club de la Sarthe.
Sep 5						
	1	WW	19 min 48-2/5 sec	23-24 k	15-20 m	
	2	WW	3 min 21 sec	3 k	10 m	Plane crash landed but Wilbur suffered only slight injury to one arm.
Sep 10						
	1	WW	9 min 10-3/5 sec	ca. 10-1/2 k	60-80 ft	About 3,000 spectators witnessed flights.
	2	WW	21 min 43-2/5 sec	27-28 k	100-120 ft	
Sep 11						
	1	WW	2 min 43 sec		15 m	Flight was hampered by fog.
	2	WW	4 min 24-3/5 sec			

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	3	WW	4 min 52-2/5 sec			Flights three and four were terminated because of faulty magneto.
	4	WW	4 min 32 sec	ca. 4 k	30 ft	
Sep 12						The flights were witnessed by Lazare Weiller, Rene Quinton, Henri Deutsch de la Meurthe, Henri Farman, Marcel Kapferer, Henry Kapferer, Lucien Beckmann, Paul Tissandier, Paul Zens, Paul Rousseau, Richard Popp, Count Gabriel de Laperouse, Jean Laroche, Mr. Dennery, Baron and Baroness R. de Sennevoy, and many other well known experts in aeronautics.
	1	WW	4 min 8-1/5 sec	700 m	30 ft	
	2	WW	6 min 41-4/5 sec	1000 m	10 ft	
Sep 16						
	1	WW	39 min, 18-2/5 sec	48 k	12 m	Flight broke existing French record.
	2	WW	2 min 28-1/5 sec	2-1/2 k	40 ft	Ernest Zens, French balloonist, passenger. Spectators included Paul Tissandier, Frank S. Lahm, Leonard Tauber, Paul Zens, Ernest Zens, Mr. Dittenbach, Leon Bollee, Charles H. Botsford of Los Angeles, Count Georges Castillon de Saint-Victor, and French Gen. Arthur Joseph Poline.
Sep 17						
	1	WW	6 min 43-2/3 sec	4,600 yds	4-5 m	
	2	WW	32 min 47 sec	ca. 36 k 600 m	25 m	
Sep 21	1	WW	1 hr 31 min 25-4/5 sec	66 k 600 m	15 m	Flight established world duration and distance flying records. Paul Rousseau was official timekeeper. American Ambassador Henry White was among those congratulating Wilbur on his achievement. Spectators included officials of the Aero-club de la Sarthe, Gen. Georges A. Bazaine-Hayter, and a large number of French and foreign officers and airplane enthusiasts. The crowd was estimated at 10,000. Flight won Aero-Club de France prize of \$1,000.
Sep 22	1	WW	3 min 3 sec			Flight witnessed by Prof. Percival Lowell, Baron Paul d'Estournelles de Constant, and representatives of the Aero-Club de France.
Sep 24	1	WW	54 min, 3-1/3 sec	55 k 24 m	ca. 80 ft	The flight was carried out in an especially strong and gusty wind, preventing Wilbur from attempt to break records established on September 21.
Sep 25						
	1	WW	36 min 14-3/5 sec			Spectators included Lazare Weiller, Frank H. Butler of England, Ernest Archdeacon, Leon Delagrange, Louis Dausset, Mrs. Joseph Caillaux and Mrs. Pelletier.
	2	WW	5 min 4-2/5 sec		15 m	
	3	WW	9 min 1-3/5 sec		12 m	Paul Zens, French balloonist, passenger.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Sep 28						
	1	WW	1 hr 7 min 24-4/5 sec	48 k 120 m	10 m	Flight won 5,000-franc prize of the Commission of Aviation of the Aero-Club de France.
	2	WW	11 min 35-2/5 sec		ca. 30 m	Paul Tissandier, passenger. Flight was a world record.
	3	WW	6 min 15 sec			Count Charles de Lambert, passenger. Flight was witnessed by Simon Lake, inventor of the submarine, and by Paul Cornu, inventor of the helicopter.
Oct 3						New propellers with larger blades were used for the first time. The landing on the last flight of the day was made in darkness, and Wilbur was guided by a lantern hung on the starting pylon. George P. Dickin, New York Herald reporter, passenger first journalist to be taken aloft on an airplane trip. Spectators included Maj. B. F. S. Baden-Powell, J. T. C. Moore-Brabazon, Mr. and Mrs. John Adams Thayer, Capt. and Mrs. Frank H. Mason, Alexandre Darracq, Albert Clemenceau, Leon Barthou, Baron Henri de Rothschild, Charles Mascart, and R. and Mrs. Lazare Weiller.
	1	WW	4 min 50-1/5 sec		1.50 m	
	2	WW	9 min 31-2/5 sec	12 k 412 m		
	3	WW	2 min 22-1/5 sec			
	4	WW	18 min 23-4/5 sec	14 k	10 m	
	5	WW	3 min 2-2/5 sec			
	6	WW	55 min 32-1/5 sec			Frantz Reichel, writer for Figaro, was passenger on this world record flight. The flight with Relchel qualified as one of the two flights stipulated in the Wright contract with Lazare Weiller.
Oct 5						
	1	WW	4 min 9 sec	twice around field		Leon Bollee, automobile manufacturer, passenger.
	2	WW	3 min 54 sec			Rene Peller, passenger; also on rest of day's flights.
	3	WW	7 min 30 sec			
	4	WW	30 sec			
	5	WW	10 min			
Oct 6	1	WW	1 hr 4 min 26-1/5 sec	70 k	25 m	Arnold Fordyce, passenger. Flight set a world record and fulfilled the requirements of the Wright contract with Lazare Weiller which called for the payment of \$100,000 to the Wrights and gave rights to manufacture and sell Wright airplanes in Europe to the French syndicate.
Oct 7						
	1	WW	3 min 24 sec			Hart O. Berg, passenger.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	2	WW	2 min 3 sec			Mrs. Hart O. Berg, passenger.
	3	WW	4 min 25-4/5 sec			Felix Lardry, secretary of the Aero-Club de la Sarthe, passenger.
	4	WW	4 min 22 sec			Paul Jamin, vice president of the Aero-Club de la Sarthe, passenger.
	5	WW	4 min 12-2/5 sec			A. Michalopoulos, age 11, nephew of Leon Bollee, passenger.
	6	WW	4 min 24-4/5 sec			Lt. Basile Soldatenkow, attaché from Russian embassy in Rome, passenger.
Oct 8						Several flights witnessed by Dowager Queen Margherita of Italy.
	1	WW	4 min 22 sec			Griffith Brewer, passenger, first Englishman to fly.
	2	WW	4 min 20 sec			Charles S. Rolls, founder of British Rolls-Royce automobile firm, passenger.
	3	WW	4 min 31 sec			Frank H. Butler, British Aeronautical Society member, passenger.
	4	WW	4 min			Maj. B. F. S. Baden-Powell, president of Aeronautical Society of Great Britain, passenger.
	5	WW	4 min 25 sec			Serge Kaznakoff, chamberlain to the Russian Emperor, passenger.
	6	WW	4 min 21-3/4 sec			Mrs. Leon Bollee, passenger.
	7	WW	14 min 55-4/5 sec			Cmdr. Victor P. Boutieaux, passenger.
Oct 9						
	1	WW	4 min 59-4/5 sec			Mrs. Lazare Weiller, passenger.
	2	WW	7 min 26-1/5 sec			Henri Deutsch de la Meurthe, oil magnate, passenger
	3	WW	7 min 37 sec			Mr. Edouard Bernheim, French naval constructor, passenger
	4	WW	3 min 20 sec			Captain Nollet, passenger
	5	WW	4 min			
	6	WW	4 min			
Oct 10	1	WW	1 hr 9 min 45-2/5 sec	55 k (actual distance 77-80 k)	10 m	Paul Painleve, mathematician and member of French Institute, passenger. Flight set a world record.
Oct 12	1	WW	2 min 40 sec			Capt. Lucas-Girardville, passenger. Engine performed poorly.
Oct 15						
	1	WW	1 min 38 sec			Arturo Mercanti, passenger.
	2	WW	2 min 35 sec			Rene Gasnier, passenger.
	3	WW	4 min 20 sec	80 ft		
Oct 21	1	WW	6 min 40 sec	7 k		Flight was made at Tourny.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Oct 24						
	1	WW	2 min 30 sec			
	2	WW	3 min 17-2/5 sec			Dr. Giovanni B. Pirelli, Italian automobile tire manufacturer from Milan, passenger.
	3	WW	4 min 58 sec	15 m		Cmdr. Emmanuel M. V. Petithomme, passenger.
	4	WW	3 min 2 sec			Baron Oskar von Lancken-Wakenitz, German charge d'affaires in Paris, passenger.
Oct 28						
	1	WW	12 min	ca. 15 ft		Count Charles de Lambert, student-passenger, received his first lesson.
	2	WW	8 min			De Lambert, student-passenger, and on next flight also.
	3	WW	15 min 2-3/5 sec			
Oct 29						
	1	WW	7 min 5-3/5 sec			De Lambert, student-passenger, on these flights.
	2	WW	17 min 34-2/5 sec			
	3	WW	19 min 25-3/5 sec			
Oct 30	1	WW	15 min			De Lambert, student-passenger. Failure of motor prevented further flight.
Oct 31						
	1	WW	4 min 30 sec	200 ft		
	2	WW	10 min 37 sec	40 m		Paul Doumer, member of French parliament, passenger. Flights witnessed by a committee sent by French minister of War and by several members of the Chamber of Deputies.
Nov 10						
	1	WW				
	2	WW	15 min 2-3/5 sec			Capt. Lucas-Girardville, student-passenger, received first lesson.
Nov 11						
	1	WW				Captain Lucas-Girardville, student-passenger. Upright broken in making sharp turn of the rear elevator prevented successful start.
	2	WW	15 min			De Lambert, student-passenger; again on next flight.
	3	WW	20 min			
	4	WW	10 min			Lucas-Girardville, student-passenger.
Nov 12						
	1	WW	15 min			De Lambert, student-passenger.
	2	WW				Lucas-Girardville, student-passenger; again on next flight.
	3	WW				

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Nov 13						
	1	WW				Start made without use of catapult.
	2	WW	15 min			Lucas-Girardville, student-passenger.
	3	WW		60 m		Flight won prize for altitude give by the Aero-Club de la Sarthe.
	4	WW	5 min			Georges Durand, passenger.
	5	WW	15 min			De Lambert, student-passenger.
Nov 16						
	1	WW	19 min			De Lambert, student-passenger.
	2	WW	21 min			Lucas-Girardville, student-passenger.
	3	WW	5 min			Marquis de Viana, Grand Equerry of King of Spain, passenger
	4	WW	8 min 20 sec			Jose Quinones de Leon, Secretary of the Spanish Embassy in Paris, passenger.
Nov 17						
	1	WW	29 min 34 sec			De Lambert, student-passenger; again on next flight.
	2	WW	22 min			
	3	WW	1 min 40 sec			Attempt to compete for Aero-Club de France altitude prize was unsuccessful when faulty motor ended flight.
Nov 18						
	1	WW	3 min 32 sec	60 m		Start made without use of catapult. Flight took altitude prize of the Aero-Club de France.
	2	WW	9 min 24 sec			Frank S. Lahm, passenger.
	3	WW	19 min			Lucas-Girardville, student-passenger.
Dec 4						
	1	WW	10 min			Lucas-Girardville, student-passenger on these flights.
	2	WW	25 min			
Dec 16						
	1	WW	ca. 10 min	90 m		Spectators included Prince Singh of Kapurthala, India, Col. And Mrs. H. S. Massy, Maurice Farman, W. S. Hogan, Stephen A. Marples, C. G. Grunhold, R. H. S. Abbott, Leon Bollee, and about 20 members of the Aeroplane Club of Great Britain.
	2	WW		60 m		
Dec 18						
	1	WW	1 hr 54 min 2/5 sec	99 k 800 m	115 m	Flight set world record, surpassing Wilbur's record of September 21. Flight took prize for altitude, Aero-Club de la Sarthe, value \$200, for the third time.
	2	WW				
Dec 19						
	1	WW	10 min			

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	2	WW	4 min 45 sec			Flight witnessed by delegation from the French parliament.
Dec 26	1	WW	10 min		12 m	
Dec 30	1	WW	1 hr 52 min 40 sec	96 k 800 m (real distance about 115 k)	60 m	Flight carried out in extremely cold weather, 18 degrees F.
<hr/>						
Dec 31						
	1	WW	42 min			
	2	WW	2 hr 18 min 33-3/5 sec (extended to 2 hrs 20 min 23-1/5 sec)	123 k 200 m		Extended time and distance of flight set new world duration and distance records. Flight won Michelin Cup prize of 20,000 francs and Albert Triaca Prize of 500 francs. Weather at freezing point. Wilbur congratulated on landing by Louis Barthou, minister of Public Works. Other spectators included Cabinet Chief Henri Lillaz, Leon Barthou, and German engineers Ansbert Vorreiter, Koberg, and Bourcart. Designated official witnesses were Leon Bollee, George Durand, Rene Pellier, L. Vernay, Veber, Bariller, Felix Lardry, and V. Leclerc.
	3	WW	3 min 57-3/5 sec			Louis Barthou, passenger.
<hr/>						
Jan 2						
	1	WW	ca. 2 min			Wilbur's last flying at Camp d'Auvours. Four friends taken as passengers for several minutes each. L. Vernay, passenger
	2	WW	ca. 2 min			Pean, foreman at the Bollee factory, passenger.
	3	WW	ca. 2 min			Belouin, passenger.
	4	WW	ca. 2 min			Patrice Doroty, passenger.
<hr/>						
<b>1908 Fort Myer, Va. Wright 1907 Machine</b>						
						Orville left Dayton on August 19 for Washington, arriving there on August 20 to conduct acceptance tests with the Wright airplane for the U.S. Army. Two mechanics also came from Dayton to assist Orville in the trials, Charles E. Taylor arriving on August 19 and Charles W. Furnas on August 21. The Wright machine arrived on August 20 and the engine on August 25. The period August 21-September 2 was spent in assembling the machine and testing the engine. The committee which was to pass upon the trials consisted of Maj. George O. Squier, Maj. Charles S. Wallace, and Lts. Frank P. Lahm, Thomas E. Selfridge, and, Benjamin D. Foulois. The fatal accident on September 17 terminated the test flights for the year.
Sep 3	1	OW	1 min 11 sec	1-1/2 times around field	35 ft	Machine damaged in landing. Flight witnessed by Theodore Roosevelt, Jr.
Sep 4	1	OW	4 min 15 sec	3 miles	40 ft	
Sep 7	1	OW	55 sec	7/8 mile		
Sep 8						
	1	OW	11 min, 10 sec	13 times around field		

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	2	OW	7 min, 34 sec	8 times around field		
Sep 9						
	1	OW	57 min 31 sec	57 times around field	110 ft	Flight was world's record to date.
	2	OW	62 min 15 sec	55 times around field	80 ft	Witnessed by secretary of the Navy Victor H. Metcalf, Secretary of Commerce and Labor Oscar S. Straus, and Secretary of War Luke E. Wright.
	3	OW	6 min 24 sec	6-1/2 times around field	60 ft	Lt. Frank P. Lahm, passenger, his first flight in a heavier-than-air machine. Three new world endurance records set: two for flights with pilot only, the third for pilot with passenger.
Sep 10	1	OW	1 hour 5 min 52 sec	58 times around the field	ca. 200 ft	Broke duration record set on September 9.
Sep 11						
	1	OW	10 min 50 sec	9 times around field 11 k 440 m		
	2	OW	70 min 24 sec	57-1/2 times around field		Set new world endurance record.
Sep 12						Octave Chanute was among witnesses of flights.
	1	OW	9 min 6-1/3 sec			Maj. George O. Squier, U.S. Signal Corps, passenger. Flight established new world record for flight with two men.
	2	OW	1 hour 14 min 20 sec	71 times around field	ca. 300 ft	Set new world endurance record.
Sep 17	1	OW	ca. 3-4 min	4-1/2 times around field	ca. 125 ft	High winds prevented any flights on September 14, 15 and 16. Lt. Thomas E. Selfridge, U.S. Army, passenger. Plane crashed when one of the propellers split, causing it to lose pushing power and a stay wire to the tail was then torn loose, making the tail uncontrollable. Lt. Selfridge was killed and Orville severely injured. His left leg was fractured and four ribs were broken.

#### 1909 Pont-Long, France Wright 1907 Machine

Wilbur, seeking a warmer climate to continue the training of his students, Count Charles de Lambert, Capt. P. N. Lucas-Girardville, and Paul Tissandier, went to Pau at the edge of the Pyrenees in southern France. The flying field, Pont-Long, located about six miles from Pau, comprised about 195 acres. Approximately 64 flights were made by Wilbur at Pau, February 3–March 20. In 40 of these he was the pilot, while on the remaining flights he was the passenger of one or the other his students.

Feb 3						
	1	WW	5 min 57 sec		35 m	
	2	WW	5 min 4-3/4 sec			Wilbur congratulated by Alfred de Lassence, mayor of Pau, at conclusion of flights.

Feb 4						
	1	WW	5-1/2 min			

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	2	WW	ca. 3 min			Paul Tissandier, student-passenger.
	3	WW	5 min			Tissandier, student-passenger. Hubert Latham, French aviator, among spectators.
Feb 5	1	WW				Tissandier, student-passenger. Airplane damaged when leaving starting rail.
Feb 6						
	1	WW	10 min		30 m	
	2	WW	28 min 21 sec		12 m	Tissandier, student-passenger.
Feb 8						
	1	WW	16 min			Spectators included Edmond Blane, Louis Bleriot, Lt. Gen. Sir Henry H. and Lady Settle, and Count Castillon de Saint-Victor.
	2	WW	ca. 28 min			Tissandier, student-passenger.
	3	WW	ca. 31 min			Captain Lucas-Girardville, student-passenger.
Feb 9	1	WW	19 min	8 times around field	ca. 80 ft	Tissandier, student-passenger. Louis Bleriot among spectators.
Feb 11						
	1	WW	20 min			Flights witnessed by Lord Arthur Balfour, former Prime minister of England.
	2	WW	5 min			
Feb 15						
	1	Count de Lambert	21 min			Wilbur, instructor-passenger.
	2	WW	4 min			Countess de Lambert, passenger.
	3	WW	7 min 4 sec			Katharine Wright, passenger, her first flight.
Feb 17						
	1	WW	ca. 20 min			Lucas-Girardville, student-passenger.
	2	WW	ca. 20 min			Tissandier, student-passenger.
Feb 18						
	1	WW	20 min			Count de Lambert, student-passenger.
	2	WW	22 min			Tissandier, student-passenger.
	3	WW	26 min 40 sec			De Lambert, student-passenger.
	4	WW	12 min			Lucas-Girardville, student-passenger. Spectators included Gen. François, Henry Oudard, Charles S. Rolls, and Georges Clemenceau, son of French Premier.
Feb 19						
	1	WW	22 min 40 sec			De Lambert, student-passenger.
	2	WW	21 min			Tissandier, student-passenger.
	3	WW	15 min			Lucas-Girardville, student-passenger.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Feb 20						Two early morning flights made in presence of King Alfonso XIII of Spain, who was accompanied by Marquis de Viana, Jose Quinones de Leon, and Hart O. Berg, Mile de Lassence, daughter of the Mayor of Pau, Count de Lambert, Lord Alfred C. W. H. Northcliffe, and Georges Clemenceau.
	1	WW	ca. 30 min			
	2	Count de Lambert	13 min			Wilbur, instructor-passenger, Tissandier, student-passenger.
	3	WW	22 min			De Lambert, student-passenger.
	4	WW	ca. 10 min			Lucas-Girardville, student-passenger.
	5	WW				
Feb 21						
	1	WW	21 min			Tissandier, student-passenger.
	2	WW				Lucas-Girardville, student-passenger.
Feb 22						
	1	WW	Several minutes.			Tissandier, student-passenger.
	2	WW	12 min			De Lambert, student-passenger.
	3	WW	5 min			Louis Barthou, French minister of Public Works, passenger.
	4	WW	6 min			Paul Lillaz, passenger.
	5	WW	15 min			Tissandier, student-passenger.
Feb 23						
	1	WW	3 min 9 sec			De Lambert, student-passenger on these flights.
	2	WW	4 min 2 sec			
Feb 24						
	1	WW	6 min 42 sec			De Lambert, student-passenger.
	2	WW	20 min			Tissandier, student-passenger. The Duke of Leuchtenberg, accompanied by two aides, witnessed these flights.
Feb 25	1	Paul Tissandier	15 min			Wilbur, as instructor-passenger.
Feb 27						
	1	WW	6 min			Marquis Edgard de Kergariou, passenger.
	2	WW	4 min 40 sec			De Lambert, student-passenger.
Mar 1						
	1	WW	8 min			De Lambert, student-passenger.
	2	WW	21 min	130 ft		Tissandier, student-passenger.
	3	WW				Col. Pedro Vives y Vich, head of the Spanish military aeronautics department, passenger. Rudder was broken and the machine damaged on takeoff. Spectators included Duke and Duchess of Manchester, Princess Bertha of Isemburg, and Lord and Lady Galway.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Mar 11						
	1	WW	2 min 22 sec			Flights were made for the first time without use of the starting derrick.
	2	WW	5 min 34 sec			
Mar 12						
	1	WW	8 min 34 sec			De Lambert, student-passenger.
	2	WW	10 min			Tissandier, student-passenger.
Mar 13						
	1	WW				Lucas-Girardville, student-passenger on this and next flight.
	2	WW				
	3	WW	7 min 56 sec			De Lambert, student-passenger, his last flight as student.
Mar 16	1	WW	15 min			Tissandier, student-passenger.
Mar 17						
	1	WW	7 min 56 sec			Flight witnessed by King Edward VII of England.
	2	WW	12 min 22 sec			Katharine Wright, passenger.
	3	WW	3 min			Tissandier, student-passenger.
Mar 20						
	1	WW	6 min			Flight witnessed by delegation from the French Chamber of Deputies.
	2	WW	3 min			Antony Joly, deputy for the Department of Basses-Alpes, passenger.
	3	WW	5 min			J. L. Breton, deputy for the Department of Cher, passenger.
	4	WW	4 min			Georges Tharel, Chamber of Deputies, passenger.
	5	WW	8 min			Capt. P. N. Lucas-Girardville, student-passenger. This was Wilbur's last flight with his French student pilots.

#### 1909 Centocelle Flying Field, Rome, Italy Wright 1907 Machine

The Wrights came to Italy to undertake the training of two lieutenants, one from the Italian navy, the other from the army. Most of the more than 50 flights made were training flights. The rest were made with individuals who desired to be taken up as passengers. The flights by Wilbur were made at a field adjoining a military fort at Centocelle, 12 to 15 miles southeast of Rome, beginning on April 15 and continuing through April 27. Lack of documentary source materials makes it extremely difficult to record all individual flights on a particular day.

Apr 15	1	WW	ca. 10 min	30-40 m	First flight in Italy witnessed by large and enthusiastic crowd.
Apr 16					
	1	WW	6 min 5 sec	3 circuits around pylon	10-20 m
	2	WW	10 min 5 sec		20-40 m
	3	WW	5 min	2 circuits of grounds	40 m

Naval Lt. Mario Calderara, student-passenger, first training flight.

Lt. Umberto Savoia, Army Engineering Corps, passenger.

Capt. Guido Castagneris, secretary of the Club Aviatori, passenger.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	4	WW	14 min	5 circuits of grounds		Lt. Mario Calderara, student-passenger.
	5	WW	5 min	2 circuits of grounds	ca. 60 m	Former Premier of Italy Sidney Sonnino, passenger. Flight witnessed by Lloyd C. Griscom, American ambassador to Italy.
<hr/>						
Apr 17						
	1	WW	ca. 10 min			Lt. Mario Calderara was a student-passenger on these flights.
	2	WW	ca. 10 min			
	3	WW	10 min			
	4	WW	10 min			
<hr/>						
Apr 19						
	1	WW	11 min			Calderara, student-passenger on this and next flight.
	2	WW	10 min			
	3	WW	6 min			Flight made without use of starting derrick. Motor damaged in landing. Spectators included Dr. Carlo Schwanzer, minister of Posts and Telegraphs; Signor Pietro Bertolini, minister of Public Works; Signor Luigi Luzzatti, Baron Sonnino, and Prince Scipione Borghese.
<hr/>						
Apr 21						
	1	WW	5 min		ca. 70 m	Ascent made without use of drop-weight derrick.
	2	WW	4 min		30 m	Italian minister of Navy Admiral Mirabello, passenger.
	3	WW	10 min		70-80 m	Calderara, student-passenger, minister of War Mario present.
	4	WW	9 min			Calderara, student-passenger, on this and next flight.
	5	WW	15 min			
	6	WW				Duke of Gallese, passenger.
	7	WW				Emilio Maraini, passenger.
<hr/>						
Apr 22						
	1	WW	15 min			Calderara, student-passenger and on next two flights.
	2	WW	20 min			
	3	WW	8 min			
	4	WW				Prince Scipione Borghese, passenger.
	5	WW				Prince Filippo Doria, passenger.
	6	WW				Teodor Mayor, passenger. Last flights witnessed by Italian Dowager Queen Margherita.
	7	WW	8 min			Calderara, student-passenger and on next two flights.
	8	WW	17 min			
	9	WW	20 min			
<hr/>						
Apr 23						
	1	WW	ca. 20 min		ca. 30 ft	Calderara, student-passenger on both flights.
	2	WW	ca. 20 min		ca. 30 ft	

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Apr 24						
	1	WW	5-1/2 min		25 m	
	2	WW	10 min			Calderara, student-passenger on flights 2, 3, 4, and 8.
	3	WW	7 min			Flights 2, 3, and 4 were witnessed by King Victor Emmanuel III of Italy.
	4	WW	9 min			Maj. Mario Moris, passenger.
	5	WW	8 min			Lloyd C. Griscom, American ambassador to Italy, passenger.
	6	WW	7 min			Universal News cameraman accompanied Wilbur and took first successful motion pictures from an airplane in flight.
	7	WW	8 min			Oscar Sinigaglia, Italian engineer, passenger.
	8	WW	3 min			Countess Mary Macchi di Cellere, passenger, first Italian woman to fly as passenger in Italy.
	9	WW				Several of these flights were witnessed by Italian ministers Tommaso Tittoni and Pierro Bertolini.
	10	WW				
Apr 26						
	1	WW	ca. 5 min			Calderara, student-passenger on flights 1, 3, and 6.
	2	WW	3 min	60 m		Ascent made without use of lancing device.
	3	WW	ca. 10 min			
	4	WW	ca. 10 min			Lt. Umberto Savoia, student-passenger on this and next flight.
	5	WW	ca. 10 min			
	6	WW	1 min			
	7	WW	12 min			Lt. Umberto Savoia, student-passenger. His training is later completed by Lt. Calderara.
	8	WW	6 min	15 m		Prince Scipione Borghese, passenger.
	9	WW	6 min			Prince Filippo Doria, passenger.
	10	WW	8 min			Mrs. Sonia Lanino, passenger.
	11	WW				Prince Mario Borghese, passenger.
	12	WW	6 min			Ippolito Bondi, passenger.
	13	WW				Mrs. Delafield of England, passenger.
Apr 27						
						Winners of lottery organized by the Duke of Gallese of the Italian Aero Club for the privilege of flying with Wilbur are taken for short flights.
	1	WW	8 min	3 circles of field		Mrs. Frank Belleville, passenger.
	2	WW	8 min	2 circles of field		Duke de Gallese, passenger.
	3	WW	5 min	2 circles of field		Emilio Maraini, passenger.
	4	WW	5 min	2 circles of field		Marcello Orilla, Italian sportsman, passenger.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
<b>1909 Fort Myer, Va. Wright 1909 Signal Corps Machine</b>						
						The flights of June and July were a continuation of the government trials that had been interrupted by the accident occurring on September 17, 1908. In the 1909 Signal Corps machine the Wrights introduced a combination of a front movable rudder with a fixed horizontal plane in the rear of the machine in contrast to the front horizontal rudder used in the 1903 to 1908 machines. The flights of June 29, June 30, and July 1 were witnessed by Bishop Wright and his eldest son, Reuchlin, who had come to Washington to see them.
Jun 29						
	1	OW	7-3/5 sec			
	2	OW	8 sec			
	3	OW		60 yds		
	4	OW	40-1/3 sec		25 ft	
Jun 30	1	OW	21-3/5 sec		20 ft	
Jul 1						
	1	OW	5 min		50 ft	
	2	OW	7 min 52 sec		30 ft	
	3	OW	9 min 11-2/5 sec		18 ft	
Jul 2	1	OW	7 min 41-1/5 sec		80 ft	In landing, the branches of a dead tree ripped canvas, breaking 7 ribs of main plane and skids. Orville was forced to return to Dayton to make new wing covering, returning to Washington on July 7.
Jul 12	1	OW	5 min 31 sec		85 ft	
Jul 13						
	1	OW	15 sec			Engine was not working satisfactorily.
	2	OW	15-3/5 sec			
Jul 17						
	1	OW	13-3/5 sec			
	2	OW	16 min 54 sec		80 ft	
Jul 19						
	1	OW	25 min 17-2/5 sec	Circled field 24.5 times	100 ft	
	2	OW	29 min 57 sec	Circled field 28.5 times	125 ft	
Jul 20	1	OW	1 hour 20 min 45 sec	Circled field 83 times	300 ft	Three figure eights made. New duration record broke previous record set by Orville on September 12, 1908, at Fort Myer.
Jul 21						
	1	OW	1 min 32-4/5 sec	Circled field 1-1/2 times	60 ft	

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	2	OW	10 min 45 sec	Circled field 12 times (about 8 miles)	175 ft	
Jul 24	1	OW	20 min 26-1/2 sec	Circled field 21 times.		
Jul 26	1	OW	2 min 20 sec		50 ft	Flight witnessed by President William Howard Taft.
Jul 27	1	OW	1 hour 12 min 37-4/5 sec	Circled field 79-1/2 times	150 ft	Lt. Frank P. Lahm, passenger. New record for two-man flight established. This flight also fulfilled Army requirement of remaining in air for an hour carrying two persons. Flight witnessed by Aeronautical Board of the Signal Corps appointed by the Chief Signal Officer of the Army to observe trials.
Jul 30	1	OW	14 min 40 sec	10 mile course, Fort Myer to Alexandria and return	450-500 ft	Lt. Benjamin D. Foulois was passenger-observer. The flight constituted the official government speed trial. An average speed of 42.583 miles per hour was achieved, and the Wrights received a bonus of \$5,000 more than the basic price agreed upon, 10 percent for each complete mile per hour over 40. President William Taft witnessed completion of flight and sent a message of congratulation to Orville. Flight was first cross country trip.

**1909 Templehof Field, Berlin, Germany Wright 1907 Machine**

						Purpose of Orville Wright's flights in Germany was to fulfill a contract made to give exhibition flights in Berlin for the German newspaper Lokal-Anzeiger and to train a flier from the German Wright Company, Flugmaschine Wright G.m.b.H.
Aug 30	1	OW	15 min			A test flight viewed only by soldiers at parade grounds.
Aug 31	1	OW	51 min 57 sec			Large gathering present, including Gen. Maximilian von Lyncker, chief of German Army Transportation. Flight ended when fuel exhausted.
Sep 4	1	OW	19 min 2 sec	ca. 20 k	10 to 20 m	Spectators included Gen. Helmuth J. L. von Moltke, Chief of the German General Staff, Gen. von Kessel, Grand Marshal Hans von Koester, American Ambassador David J. Hill, and Gen. von Schwarzkoppen.
Sep 7	1	OW	51 min 58 sec	ca. 50 k	10 to 30 m	
Sep 8						
	1	OW	35 min 52 sec		85 m	
	2	OW	16 min 27 sec		ca. 10 m	Alfred Hildebrandt, passenger. Flights witnessed by Emil Rathenau, president of the German Allgemeine Elektricitats-gesellschaft, and by Isidor Loewe, head of the Mauser rifle and machine tool works.
Sep 9						
	1	OW	12 min		40 m	Flights witnessed by Crown Prince Friedrich Wilhelm and Crown Princess Cecilie. Crowd estimated at 200,000. Capt. Paul Engelhard, passenger. Mrs. Alfred Hildebrandt, passenger, first woman to fly as passenger in an airplane in Germany.
	2	OW	14 min			

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	3	OW	12 min 15 sec			
	4	OW	8 min 38 sec			
Sep 10	1	OW	1 hr 2 min 38 sec	37-1/2 miles	50 to 60 m	
Sep 11						
	1	OW	42 min 16 sec		more than 100 m	
	2	OW	4 min 45 sec			Capt. Richard von Kehler, chairman of the German Wright Company, passenger. Defective motor curtailed flight.
Sep 13						
	1	OW	7 min 36 sec			Prof. Hugo Hergesell, University of Strassburg, passenger.
	2	OW	17 min 7 sec			
Sep 17						
	1	OW	ca. 30 min			Engelhard, passenger.
	2	OW	54 min 34 sec		172 m	Flight witnessed by Empress of Germany, Prince Adalbert, Prince August Wilhelm, and Princess Viktoria Luise, broke existing altitude record.
Sep 18						
	1	OW	1 hr 35 min 46 sec			Engelhard, passenger. Flight set record for flight with passenger.
	2	OW	1 hr 45 min			
<b>1909 Governors Island, N.Y. Wright 1907 Machine</b>						
Sep 29						
	1	WW	7 min 10 sec	ca. 2 miles (complete circle of island)	40 to 100 ft	Governors Island had been chosen as a starting point by the Judson-Fulton Celebration Commission.
	2	WW	Less than 5 min			Flew from drill field on Governors Island on course around Statue of Liberty and return. Among vessels saluting the flight was the ocean liner Lusitania just starting to Liverpool.
	3	WW	12 min			Strong wind, creating unfavorable flying conditions curtailed planned extended flight, which set unofficial altitude record.
Oct 4	1	WW	33 min 33 sec	ca. 20 miles	Average height about 200 ft	Flew over Hudson River to a point about 1,000 feet north of Grant's Tomb and return. On return passed over British warships Drake and Inflexible. Average speed about 36 miles an hour. Wilbur carried a canoe under the wing. A planned second flight on this date was abandoned when a cylinder head blew out in attempting to start.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
<b>1909 Bornstedt Field, Potsdam, Germany Wright 1907 Machine</b>						
Sep 29	1	OW	30 min			Having completed his exhibition flights at Tempelhof Field in Berlin, Orville moved to Bornstedt Field, a drilling ground for the Potsdam garrison, to give training lessons to Capt. Paul Engelhard, retired German Naval officer.
Sep 30	1	OW	20 min 20 sec			Engelhard, student-passenger.
	2	OW		250-300 m		Empress of Germany, Prince Oskar, and Princess Viktoria Luise observed the flight.
Oct 2	1	OW				
	2	OW	ca. 15 min	25-30 m		Crown Prince Friedrich Wilhelm, passenger, first member of a royal family to ride in an airplane. Following the flight the Crown Prince presented Orville with a gold tiepin with the Crown Prince's initial "W" in rubies and diamonds.
	3	OW	ca. 20 min	500 m		Flight established new unofficial world's altitude record.
Oct 7	1	Engelhard				Orville, passenger. Engine stopped suddenly causing forced landing. Front skid broken.
Oct 13	1	OW				Engelhard, student-passenger.
	2	OW				Engelhard, student-passenger.
	3	OW				Capt. Engelhard, student-passenger, who subsequently made three solo flights on this date, completing his training by Orville.
	4	OW	10 min			Dr. Heinrich Adams, passenger.
	5	OW		1 m		A speed test with Fridolin Keidel, passenger.
Oct 14	1	OW	30 min			
	2	OW	ca. 25 min	ca. 50 m		Mr. Susemann, passenger.
	3	OW				Machine almost destroyed when gasoline caught fire on starting and section of canvas on lower plane burned.
Oct 15	1	OW	25-30 min	100-150 m		Flight witnessed by German Emperor Wilhelm, the Empress, Princess Viktoria Luise, Gen. Hans G. H. von Plessen, and Baron Max B. A. Holzing Verstett. Orville had delayed his departure from Berlin on request of the Emperor. This was the first time the Emperor had seen an airplane in flight. Before leaving, he presented Katharine with an auto graphed photograph of himself. This concluded Orville's flights in Germany.

**1909 College Park, Md. Wright 1907 Machine**

Wilbur had arrived at College Park, Md., on October 5 to train Signal Corps officers in fulfillment of Wrights' contract with the War Department.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Oct 8						
	1	WW	3 min		ca. 30 ft	
	2	WW	4 min 51 sec		ca. 100 ft	
	3	WW	3 min		ca. 150 ft	
	4	WW	5 min 8 sec			Lt. Frank P. Lahm, student-passenger.
	5	WW	4 min 15 sec			Lt. Frederic E. Humphreys, student-passenger.
Oct 9						
	1	WW	58-3/5 sec	ca. 1,300 m		Speed of 46 miles an hour established record for flight over closed circuit 500-meter course.
	2	WW	6 min 33 sec			
	3	WW	3 min 23 sec			
	4	WW	1 min 6 sec			Minister Wu Ting-fang of China witnessed two flights.
Oct 11	1	WW	3 min 50 sec			Flight made without use of falling weight and starting derrick.
Oct 12	1	WW	7 min 2 sec	5 rounds of field		Humphreys, student-passenger.
Oct 15						
	1	WW	4 min 48 sec			Lahm, student-passenger.
	2	WW	1 min 32 sec			Humphreys, student-passenger.
	3	WW	9 min			
	4	WW	14-1/2 min			Lahm, student-passenger.
	5	WW	3-1/2 min			Humphreys, student-passenger.
Oct 16						
	1	WW	13 min 18 sec			Humphreys, student-passenger.
	2	WW	13 min 44-1/5 sec			Lahm, student-passenger.
	3	WW	3 min 34-4/5 sec			For a minute or two Wilbur raced Baltimore and Ohio Railroad train traveling 50 miles an hour.
Oct 18						
	1	WW	11 min 47-2/5 sec			Humphreys, student-passenger.
	2	WW	18 min 37-2/5 sec			Lahm, student-passenger.
	3	WW	10 min 13-3/5 sec			Humphreys, student-passenger.
	4	WW	11 min 34-2/5 sec			Lahm, student-passenger.
	5	WW	9 min 37-1/5 sec			Humphreys, student-passenger.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	6	WW	9 min 19-4/5 sec			Lahm, student-passenger.
Oct 19						
	1	WW	12 min 7 sec			Humphreys, student-passenger.
	2	WW	4 min 10-2/5 sec			Lahm, student-passenger.
	3	WW	3 min 15 sec			
	4	WW	18 min 40 sec			Humphreys, student-passenger.
	5	WW	18 min 6 sec			Lahm, student-passenger.
Oct 20						
	1	WW	3 min 25 sec			Humphreys, student-passenger.
	2	WW	6 min 28 sec			Lahm, student-passenger.
	3	WW	2 min 31 sec			
	4	WW	27 min			Humphreys, student-passenger.
Oct 21						
	1	WW	33 min			Lahm, student-passenger. Two spectators crossed in front of plane as it was landing and accident was narrowly avoided.
	2	WW	1 min			Humphreys, student-passenger.
	3	WW	2 min			
Oct 22						
	1	WW	3 min			
	2	WW	42 min			Humphreys, student-passenger.
Oct 23						
	1	WW	18 min			Lahm, student-passenger.
	2	WW	8 min			Humphreys, student-passenger.
	3	WW	13 min			Benjamin. D. Foulois, student-passenger.
	4	WW	11 min			Lahm, student-passenger.
Oct 25						
	1	WW	13 min			Foulois, student-passenger.
	2	WW	11 min			Humphreys, student-passenger.
	3	WW	18 min			Lahm, student-passenger.
	4	WW	1-1/2 min			
Oct 26	1	WW	2 min	100 ft		Humphreys and Lahm made solo flights on this date.
Oct 27						
	1	WW	4 min	2 circles of field	ca. 60 ft	Mrs. Ralph H. Van Deman is passenger, first woman to fly as passenger in the United States.
	2	WW	2 min		125 ft	

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	3	WW	28 min 21 sec			Foulois, student-passenger.
	4	WW	6-1/2 min			Capt. Charles DeF. Chandler, passenger.
Nov 1	1	WW	2 min			Flight made after dark.
Nov 2	1	WW	2 min			
	2	WW	2 min			Lahm, student-passenger.

## **1910 Montgomery, Ala. Wright 1907 Machine**

Following the decision of the Wright Company to engage in exhibition flying Orville commenced the training of pilots to handle the exhibition planes being built by the company. The flights were carried out at Montgomery, Ala., on the site of the present Maxwell Air Force Base, chosen by Wilbur because the late winter and spring weather there was more conducive to the flight operations than in Dayton. The five students participating were: Walter Brookins, Dayton, Ohio; J. W. Davis, Colorado Springs, Colo.; Spencer C. Crane, Dayton; Arch Hoxsey, Dayton; and Arthur L. Welsh, Washington D.C. The training was conducted by Orville who arrived in Montgomery on March 24 and departed on May 7. The training of Welsh by Orville was resumed in Dayton on May 10. Brookins and Hoxsey resumed flying in Dayton on June 1.

Mar 25	1	OW	2 flights, 10 miles altogether
Mar 28			
1	OW		
2	OW		
3	OW	ca. 5-6 min	100 ft      Walter Brookins, student-passenger.
4	OW		Piston valves and cylinder of engine damaged at start, preventing takeoff.
Mar 31	1	OW	Trial unsuccessful-airplane jumped back.
Apr 1			
1	OW	6 min	8 starts made-plane jumped back twice.
2	OW	11 min	Brookins, student-passenger on this and next flight.
3	OW		
4	OW		J. W. Davis, student-passenger.
Apr 2			
1	OW		
2	OW		
3	OW	17 miles	Brookins, student-passenger. Valve broke in last flight.
Apr 7	1	OW	6 flights with four student-passengers.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
Apr 21						
	1	OW	4 min	2 circles of field	30 ft	
	2	OW	5 min			
Apr 22	1	OW				Walter Brookins, student-passenger.
Apr 23						
	1	OW	10 min			Brookins, student-passenger and on next two flights.
	2	OW	10 min			
	3	OW	10 min			
	4	OW	10 min			
	5	OW	10 min			
Apr 24						
	1	OW	10 min			Brookins, student-passenger and on next three flights.
	2	OW	10 min			
	3	OW				
	4	OW				
	5	OW	19 min			
Apr 27						
	1	OW				Brookins, student-passenger and on next flight.
	2	OW				
	3	OW				
Apr 29						
	1	OW				Brookins, student-passenger on flights 1, 2, 3, 6, and 7. More than 1,000 persons were in attendance to witness flights.
	2	OW				
	3	OW				
	4	OW				Arthur L. Welsh, student-passenger.
	5	OW				Spencer C. Crane, student-passenger.
	6	OW				
	7	OW				
	8	OW				
Apr 30						
	1	OW	10 min			Largest crowd of season in attendance.
	2	OW	10 min			Brookins, student-passenger.
	3	OW	10 min			Crane, student-passenger.
	4	OW	10 min			Arch Hoxsey, student-passenger.
	5	OW	10 min			

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	6	Walter Brookins	10 min			Orville, passenger.
	7	OW	15 min			
	8	OW	10 min			
	9	OW	10 min			
	10	OW	10 min			
<hr/>						
May 3						
	1	OW	ca. 30 min	300 ft		Frank D. Kohn of Montgomery, passenger.
	2	OW				Brookins, student-passenger.
	3	OW				Hoxsey, student-passenger.
	4	OW				Welsh, student-passenger.
	5	OW				
	6	OW				
	7	OW				
	8	OW				
	9	OW				
	10	OW	18 min	1,000 ft		
	11	OW				
<hr/>						
May 5						
	1	OW	17 min			Orville's last flight in Montgomery. He departed on May 7 leaving school and training in charge of Brookins. The last flight of Brookins and his students were on May 25.
	2	Brookins	12 min			
	3	Brookins	4 min			
	4	Brookins	13 min			
	5	Brookins	8 min			
<hr/>						
1910 Simms Station, Dayton, Ohio Wright 1907 Machine, May 10-20—Model B, May 21-October 14						
<hr/>						
						Shortly after the return of Orville from Montgomery, Ala., on May 8, 1910, the Wrights opened the Wright Flying School in Dayton to continue the training, begun in Montgomery, of pilots who would conduct exhibition flights for the Wright company. This school was in operation 1910-1916. Orville, in May and June, completed the training of Arthur L. Welsh and Duval La Chapelle. Walter Brookins, trained by Orville in Montgomery, trained Ralph Johnstone and Frank T. Coffyn and completed the training of Arch Hoxsey begun in Montgomery. These men became the first Wright Company exhibition flyers.

May 10

1	OW	8 min 7 sec
2	OW	10 min 12 sec

Shortly after the return of Orville from Montgomery, Ala., on May 8, 1910, the Wrights opened the Wright Flying School in Dayton to continue the training begun in Montgomery, of pilots who would conduct exhibition flights for the Wright company. This school was in operation 1910-1916. Orville, in May and June, completed the training of Arthur L. Welsh and Duval La Chapelle. Walter Brookins, trained by Orville in Montgomery, trained Ralph Johnstone and Frank T. Coffyn and completed the training of Arch Hoxsey begun in Montgomery. These men became the first Wright Company exhibition flyers.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	3	OW	11 min 4 sec			
	4	OW	10 min 6 sec			Arthur L. Welsh, student-passenger on this and next flight.
	5	OW	20 min 1 sec			
<hr/>						
May 12						
	1	OW	12 min 50 sec			
	2	OW	14 min 50 sec			
	3	OW	15 min			
	4	OW	15 min 30 sec			Welsh, student-passenger on this and next flight.
	5	OW	8 min 30 sec			
<hr/>						
May 14						
	1	OW	8 min			
	2	OW	14 min 30 sec	1,300 ft		Welsh, student-passenger on this and next two flights.
	3	OW	15 min			
	4	OW	18 min			
	5	OW	10 min			
<hr/>						
May 16						
	1	OW	10 min 30 sec			Welsh, student-passenger.
	2	OW	12 min 30 sec			
<hr/>						
May 18						
	1	OW	9 min 8 sec			
	2	OW	8 min 26 sec			Welsh, student-passenger on flights 2, 3, 7, and 8.
	3	OW	10 min 7 sec			Arthur Ruhl, of Collier's, passenger.
	4	OW	17 min 41 sec			Albert B. Lambert, president of St. Louis Aero Club, passenger. (Lambert was later to become one of the backers of the New York to Paris flight of Lindbergh in the Spirit of St. Louis.)
	5	OW	9 min 34 sec			
	6	OW	11 min 8 sec			
	7	OW	15 min 45 sec			
	8	OW	10 min 34 sec			
<hr/>						
May 19						
	1	OW	15 min 2 sec			Welsh, student-passenger on flights 1, 2, 3, 6, and 8.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	2	OW	14 min 52 sec			
	3	OW	13 min 2 sec			
	4	OW	8 min 44 sec			
	5	OW	10 min 25 sec			Duval La Chapelle, student-passenger.
	6	OW	9 min 28 sec			
	7	OW	20 min 50 sec		1,760 m	
	8	OW	10 min 29 sec			
<hr/>						
May 20						
	1	OW	11 min 12 sec			Welsh, student-passenger.
	2	OW	12 min 41 sec			Frank T. Coffyn, passenger.
	3	OW	13 min 22 sec			Welsh, student-passenger.
	4	OW	11 min 32 sec			Ralph Johnstone, passenger.
	5	OW	16 min 42 sec			Welsh, student-passenger.
	6	OW				Engine did not start.
	7	OW	9 min 53 sec			La Chapelle, student-passenger.
	8	OW	8 min 29 sec			Welsh, student-passenger.
	9	OW	10 min 25 sec			Coffyn, passenger.
	10	OW	16 min 52 sec			Welsh, student-passenger.
<hr/>						
May 21						
	1	OW	18 min 35 sec	ca. 2000 ft		A new machine, model B, tried for first time.
	2	OW	11 min 39 sec			Welsh, student-passenger.
	3	OW	11 min 27 sec			Ralph Johnstone, passenger.
	4	OW	11 min 11 sec			La Chapelle, student-passenger.
	5	WW	1 min 29 sec			This was Wilbur's last flight as a pilot in the U.S.
	6	OW	5 min 37 sec			Lorin Wright, brother, passenger.
	7	OW	5 min 13 sec			Charles E. Taylor, passenger.
<hr/>						
May 24						
	1	OW	11 min 25 sec			Welsh, student-passenger on flights 1, 5, 6, 7, 9, and 11.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	2	OW	11 min 30 sec			Frank T. Coffyn, passenger on this and next flight.
	3	OW	1 min 42 sec			
	4	OW	12 min 20 sec			Ralph Johnstone, passenger.
	5	OW	12 min 12 sec			
	6	OW	7 min 30 sec		900 ft	
	7	OW	9 min 42 sec			
	8	OW	9 min 32 sec			La Chapelle, student-passenger.
	9	OW	10 min 8 sec			
	10	OW	12 min 30 sec			
	11	OW	15 min 9 sec		1,200 ft	
May 25						
	1	OW	6 min 32 sec			Welsh, student-passenger on flights 1, 4, 7, and 10.
	2	OW	7 min 40 sec			
	3	OW	5 min 1 sec			
	4	OW	12 min 35 sec			
	5	OW	15 min 11 sec		1,600 ft	
	6	OW				Unsuccessful start.
	7	OW	7 min 48 sec			
	8	OW	8 min 8 sec			
	9	OW	23 min 16 sec		2,700 ft	
	10	OW	7 min 41 sec			
	11	OW	14 min 1 sec			Frank T. Coffyn, passenger.
	12	OW	6 min 26 sec			Wilbur, passenger, the first time the brothers had flown together.
	13	OW	6 min 55 sec	350 ft		Bishop Wright, passenger, his first time in an airplane.
	14	OW	8 min 22 sec			Ralph Johnstone, passenger.
May 26						
	1	OW	11 min			Welsh, student-passenger.
	2	OW	2 min 25 sec			La Chapelle, student-passenger.
	3	OW	11 min 42 sec	600 ft		
	4	OW	8 min 24 sec			
	5	OW	5 min 24 sec			Welsh, student-passenger.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	6	OW	25 min 19 sec		2,100 ft	
	7	OW	13 min 34 sec			La Chapelle, student-passenger.
	8	OW	10 min 16 sec			Welsh, student-passenger.
	9	OW	10 min 33 sec			La Chapelle, student-passenger.
	10	OW	2 min 42 sec			Welsh, student-passenger.
May 27						
	1	OW	2 min 30 sec			Welsh, student-passenger.
	2	OW	12 min 38 sec			La Chapelle, student-passenger on next two flights.
	3	OW	11 min 58 sec			
	4	OW	9 min 59 sec			
	5	OW	9 min 14 sec	625 ft		
	6	OW	5 min 30 sec			Welsh, student-passenger.
	7	OW	11 min			La Chapelle, student-passenger.
	8	OW	7 min 1 sec			Welsh, student-passenger.
	9	OW	13 min 28 sec			La Chapelle, student-passenger.
	10	OW	5 min 2 sec			Welsh, student-passenger.
	11	Welsh	5 min 13 sec			Orville, passenger and on remaining flights.
	12	Welsh	2 min			
	13	Welsh	2 min 6 sec			
	14	Welsh	1 min 51 sec			
	15	Welsh	1 min 58 sec			
May 28						
	1	OW	4 min 8 sec			La Chapelle, student-passenger.
	2	OW	8 min 4 sec			
	3	Welsh	6 min 37 sec			Orville, passenger.
	4	Welsh				Orville, passenger. Engine failed to start.
	5	Welsh				Orville, passenger. Engine failed to start.
	6	OW	18 min 12 sec			
	7	Welsh	9 min 7 sec			Wilbur, passenger.
	8	OW	11 min 8 sec			
	9	OW	14 min 52 sec			La Chapelle, student-passenger on this and next flight.
	10	OW	25 min 47 sec			

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	11	Welsh	3 min 5 sec			Orville, passenger.
	12	OW				Frank T. Coffyn, passenger. Engine failed to start.
Jun 1	1	OW	6 min 38 sec		500 ft	
Jun 2						
	1	OW	13 min, 7 sec			La Chapelle, student-passenger.
	2	OW	6 min 10 sec			Frank T. Coffyn, passenger.
Jun 3						
	1	OW				La Chapelle, student-passenger. Engine stalled.
	2	OW				Engine stalled.
	3	OW	3 min 30 sec			
	4	OW				Engine stalled.
	5	OW	12 min 17 sec			
	6	OW	7 min 32 sec			La Chapelle, student-passenger on this and next flight.
	7	OW	17 min 23 sec			
	8	OW	15 min 6 sec			Ralph Johnstone, passenger.
	9	OW	20 min 15 sec			Frank T. Coffyn, passenger.
	10	OW	14 min 2 sec			La Chapelle, student-passenger.
	11	OW	17 min 20 sec			Coffyn, passenger.
	12	OW	4 min			La Chapelle, student-passenger.
Jun 4						
	1	OW	14 min 46 sec			La Chapelle, student-passenger.
	2	OW	12 min 24 sec			Ralph Johnstone, passenger.
	3	OW	12 min 18 sec			La Chapelle, student-passenger.
	4	OW	8 min 50 sec			Arch Hoxsey, passenger.
	5	OW	7 min			Frank T. Coffyn, passenger.
	6	OW	8 min 5 sec			La Chapelle, student-passenger and on last two flights.
	7	OW	9 min 6 sec			
	8	OW	7 min 45 sec			
	9	OW	9 min 26 sec			
Jun 7						
	1	OW	21 min		2,000 ft	
	2	OW	16 min 38 sec			La Chapelle, student-passenger and on flights 2, 3, 5, 6, and 7.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	3	OW	12 min 20 sec			
	4	OW	7 min 18 sec			Welsh, student-passenger.
	5	OW	3 min 35 sec			
	6	OW	3 min 26 sec			
	7	OW	3 min 2 sec			
Jun 8						
	1	OW	5 min 35 sec			La Chapelle, student-passenger on this and next flight.
	2	OW	15 min 11 sec			
	3	OW	5 min 56 sec			Welsh, student-passenger.
	4	OW	8 min 50 sec			Ralph Johnstone, passenger.
	5	OW	1 min 8 sec			Welsh, student-passenger.
Jun 15						
	1	OW	4 min 30 sec			
	2	OW	20 min 24 sec			
Jun 17	1	OW	30 sec			
Jun 18	1	OW	10 min			
Jul 21	1	OW				Wrights installed wheels on their machine for the first time on experimental basis.
Jul 22						
	1	OW	3 min 45 sec			
	2	OW	9 min			
	3	OW	15 min 46 sec			
	4	OW				Airplane wheels tested on rough ground.
Jul 23						
	1	OW	5 min 33 sec			
	2	OW	10 min 4 sec			
	3	OW	17 min 30 sec		1,200 ft	
	4	OW	9 min 14 sec			
	5	OW	8 min 45 sec			Walter Brookins, passenger.
	6	OW	7 min 17 sec			
Jul 26						
	1	OW	19 min, 20 sec			
Jul 27						
	1	OW	4 min			

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	2	OW	12 min		800 ft	
	3	OW	10 min 30 sec			
	4	OW	17 min 20 sec		1,200 ft	
Jul 28	1	OW	6 min 52 sec			
Jul 30						
	1	OW	11 min 22 sec			
	2	OW	4 min 58 sec			
	3	OW	13 min 52 sec			
	4	OW				Griffith Brewer, passenger. False start.
	5	OW	23 min 16 sec		ca. 400 ft	Brewer, passenger.
Aug 23	1	OW				Bishop Wright recorded flight by Orville on this date.
Sep 10						
	1	OW	10 min			
	2	OW	28 min			
	3	OW	5 min			Alexander Ogilvie, student-passenger.
Sep 22	1	OW	33 min	ca. 25 miles	2,000 to 4,000 ft	Orville flew from Simms Station over the city of Dayton and returned. Flight witnessed by 100,000 spectators.
Sep 23	1	OW			1,000 ft	Katharine Wright, passenger.
Oct 14	1	OW				Orville flew 7 times on this date.
Oct 22	1	OW				Orville testflew new Wright Model R, known also as "Baby Grand," built to compete for the Gordon-Bennett International Aviation Trophy race to be held at Belmont Park, N. Y. He attained speed of 77-78 miles an hour.

**1911 Kitty Hawk, N.C. Wright 1911 Glider**

Orville, in the company of his brother Lorin, his nephew Horace, and his friend Alexander Ogilvie, of England, left Dayton on October 7 and arrived in Kitty Hawk on October 10 for the purpose of conducting gliding experiments. The Wright 1911 glider generally resembled the Wright 1911 powered machine, weighed about one third as much, and lacked its motor. Modifications in the design were made as the gliding experiments proceeded. It was the intention also to test the automatic stabilizer Orville had been working on for a number of years. However, the experiments were concluded without a test of the automatic stabilizer because of the presence of a group of newspaper men who came to camp each day during this entire stay. Four had arrived at Kitty Hawk on October 13: John Mitchell, Associated Press; Mitchell, New York Herald; D. Bruce Salley, a reporter from Norfolk; and Van Ness Harwood, New York World. Arnold Kruckman and Berges, of the New York American, reached Kitty Hawk

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
						on October 20. A new soaring record of nine minutes 45 seconds was established by Orville on October 24, which remained a world's record until broken in Germany 10 years later. The 1911 experiments were the last conducted by the Wrights at Kitty Hawk.
Oct 16						
	1	OW				West Hill, Kill Devil Hill. Six glides made, longest 250 yds, maximum time 26 sec.
	2	OW				Three glides made.
	3	OW	23 sec	637 ft in curved line plus 586 ft in straight line		Orville pitched forward out of the glider.
Oct 17		OW				West Hill. Orville made two glides. Alexander Ogilvie three.
Oct 18						
	1	OW	1 min 15 sec			
	2	OW	1 min 15 sec			Machine turned over, breaking both left wings and the rear horizontal rudder. Orville escaped injury.
Oct 23	1	OW				Two glides made. In second glide machine turned over, breaking both vertical and horizontal rudders. Orville again escaped injury.
Oct 24	1	OW	9 min 45 sec	ca. 1/4-mile	ca. 200 ft	About 20 glides made, ranging from one minute to 9 min 45 sec. Flight of 9 min 45 sec set new soaring record.
Oct 25						
	1	OW	23 sec			West Hill.
	2	OW	10 sec			
	3	OW	32 sec			
	4	OW	8 sec			
	5	OW	9 sec			
	6	OW	9 sec			
	7	OW	22 sec			
	8	OW	9 sec			
	9	OW	25 sec			
	10	OW	10 sec			
	11	OW	27 sec			
	12	OW	2 sec			Little Hill.
	13	OW	5 sec			
	14	OW				
	15	OW				
	16	OW	8 sec			
	17	OW	33 sec			Kill Devil Hill.

DATE	FLIGHT	PILOT	TIME	DISTANCE	ALTITUDE	REMARKS
	18	OW	43 sec			
	19	OW	28 sec			
	20	OW	44 sec			
	21	OW	44 sec			
	22	OW	59 sec			
	23	OW	24 sec			
	24	OW	33 sec			
	25	OW	26 sec			
	26	OW	26 sec			
	27	OW	29 sec			
	28	OW	31 sec			
	29	OW	22 sec			
	30	OW	25 sec			
	31	OW	23 sec			
Oct 26						
	1	OW	1 min 13 sec			Big Hill.
	2	OW	1 min 26 sec			
	3	OW	46 sec			
	4	OW	1 min 8 sec			
	5	OW	1 min 24 sec			
	6	OW	1 min 31 sec			
	7	OW	2 min 25 sec			
	8	OW	2 min 52 sec			
	9	OW	41 sec			
	10	OW	29 sec			
	11	OW	49 sec			
	12	OW	ca. 1 min			
	13	OW	36 sec			
	14	OW	37 sec			
	15	OW	41 sec			
	16	OW	1 min 1 sec			
	17	OW	18 sec			
	18	OW	49 sec			
	19	OW	58 sec			
	20	OW	25 sec			
	21	OW	41 sec			
	22	OW	29 sec			

DATE	FLIGHT	PILOT	AIRCRAFT	TIME	DISTANCE	ALTITUDE	REMARKS
	23	OW		1 min 5 sec			
	24	OW		42 sec			
<b>1911–1918 Simms Station, Dayton, Ohio</b>							
Mar 25							Orville continued active flying and made numerous flights during the period 1911–1916, testflying new and experimental Wright Company aircraft, testing automatic flying and safety devices, and giving flight instruction to Army and Navy pilots and Wright Co. exhibition fliers. His last flight as a pilot occurred on May 13, 1918.
Apr 17		OW	Wright Model B				Howard W. Gill, student-passenger on two flights.
Apr 28	1	OW	Wright Model B				Orville made a series of flights “in which he gave an exhibition of graceful turns and slow flying such as is seldom seen.”
May 3–13		OW	Wright Model B				Arthur L. Welsh, student-passenger, received 28 postgraduate lessons during this period.
May 14	1	OW	Wright Model EX				Orville test flew new Wright exhibition model EX.
Jun 2		OW	Wright Model EX				Bishop Wright reported Orville conducting test flights.
Jul 19							
	1	OW	Wright Model EX	ca. 60 min	2-3 miles		
	2	OW	Wright Model EX	35 min			Capt. Washington J. Chambers, U.S. Navy, passenger.
Jul 26							
	1	OW	Wright Model B	13 min			Lt. Frank P. Lahm, student-passenger on these flights for postgraduate lessons.
	2	OW	Wright Model B	10 min			
	3	OW	Wright Model B	20 min			
Jul 31							
	1	OW	Wright 1907 machine	4 min			Lahm, student-passenger on these flights.
	2	OW	Wright 1907 machine	4 min			
	3	OW	Wright 1907 machine	13 min			
Aug 1							
	1	OW	Wright 1907 machine	20 min			Lahm, student-passenger on these flights.
	2	OW	Wright 1907 flights	6 min			

DATE	FLIGHT	PILOT	AIRCRAFT	TIME	DISTANCE	ALTITUDE	REMARKS
	3	OW	Wright 1907 flights	13 min			
	4	OW	Wright 1907 machine	10 min			
Aug 7	1	OW	Wright Model R				Orville made moonlight flight at Hempstead, L.I.
Aug 24– Sept 5		OW	Wright Model R				Orville accompanied Capt. Charles DeF. Chandler on a series of 25-35 postgraduate training flights.
Aug 29							
	1	OW	Wright Model R	ca. 10 min			Leontine Wright, age 12, passenger.
	2	OW	Wright Model R				Bertha Ellwyn Wright, age 14, passenger.
	3	OW	Wright Model R	ca. 5 min			Ivonette Wright, age 15, passenger.
Aug 30	1	OW	Wright Model R	10 min	400 ft		Brother Reuchlin, passenger.
Sep 1	1	OW	Wright Model R	ca. 30 min	1,600 to 1,800 ft.		Reuchlin, passenger.
1912							
Apr 27							
	1	OW	Model C Type C, M-1	31-3/5 sec			Arthur L. Welsh, passenger, Model C airplane, successor to Model B, had slightly flatter wing surfaces than the B, and the control system was somewhat simplified. A notable modification was the addition of vertical vanes to the forward ends of the skids.
	2	OW	Model C Type C, M-1				Welsh, passenger.
May 2	1	OW	Model C Type C, M-1	1 min 5 sec			Welsh, passenger.
Dec 8	1	OW	Model C Type C				Orville reported to be testing his automatic flier.
1913							
Jan 13	1	OW	Wright Model C				Automatic stabilizer tested.
May 1	1	OW	Wright Model CH				Hydroplane tests conducted on Miami River.
May 2	1	OW	Wright Model CH				Hydroplane tests on Miami River.
May 3	1	OW	Wright Model CH				Hydroplane tests on Miami River.
June–July		OW	Wright Model CH				Orville made over 100 flights during this period, frequently with passengers.
Jun 5	1	OW	Wright Model CH				James M. H. Jacobs, Charles E. Taylor, and Taylor's son carried as passengers on flight over

DATE	FLIGHT	PILOT	AIRCRAFT	TIME	DISTANCE	ALTITUDE	REMARKS
Sep 5	1	OW	Wright Model E				the Miami River, making a total load on the machine of almost 800 pounds.
Sep 27		OW	Wright Model E				Test flights made in series of experiments aimed at perfecting automatic stabilizer.
Sep 30		OW	Wright Model E				Test flights made.
Oct 11		OW	Wright Model E				Test flights made.
Nov 13		OW	Wright Model E				Test flights made.
Dec 31		OW	Wright Model E	500 ft			Orville, in 17 flights using special experimental machine with very thick surfaces, demonstrated his automatic stabilizer. The flights were witnessed by three Aero Club of America representatives: Dr. L. E. Custer and Dr. John C. Eberhardt of Dayton and Grover C. Loening of New York. Seven circles were made with heads off controls. The successful demonstration on this date resulted in the award to Orville on February 5 of the Aero Club of America Trophy for 1913 for the development of his automatic stabilizer.
<b>1914</b>							
Apr 18	1	OW		19 min			Orville flew with hands off the controls, testing new device aimed at preventing airplane dives.
Aug 12	1	OW					Orville reported flying.
Aug 20	1	OW	modified Wright Model G				Orville, accompanied by student pilot Lt. Kenneth Whiting, of the U.S. Navy, narrowly escaped drowning when the later model hydroplane he was piloting fell into the Miami River from an altitude of 30 feet when a wing broke.
<b>1915</b>							
November		OW					Series of tests on automatic stabilizer made.
<b>1916</b>							
Sept 19–21		OW					Orville reported to be flying almost every day, on one afternoon making more than a dozen flights.
Nov 1		OW					
<b>1918</b>							
May 13	1	OW	Wright 1911 model				Orville made last flight as a pilot, flying his Wright 1911 biplane alongside the first De Havilland-4, built at Moraine City, Ohio, flown by Howard M. Rinehart.

# The NASA History Series

## Reference Works, NASA SP-4000

Grimwood, James M. *Project Mercury: A Chronology*. NASA SP-4001, 1963.

Grimwood, James M., and C. Barton Hacker, with Peter J. Vorzimer. *Project Gemini Technology and Operations: A Chronology*. NASA SP-4002, 1969.

Link, Mae Mills. *Space Medicine in Project Mercury*. NASA SP-4003, 1965.

*Astronautics and Aeronautics, 1963: Chronology of Science, Technology, and Policy*. NASA SP-4004, 1964.

*Astronautics and Aeronautics, 1964: Chronology of Science, Technology, and Policy*. NASA SP-4005, 1965.

*Astronautics and Aeronautics, 1965: Chronology of Science, Technology, and Policy*. NASA SP-4006, 1966.

*Astronautics and Aeronautics, 1966: Chronology of Science, Technology, and Policy*. NASA SP-4007, 1967.

*Astronautics and Aeronautics, 1967: Chronology of Science, Technology, and Policy*. NASA SP-4008, 1968.

Ertel, Ivan D., and Mary Louise Morse. *The Apollo Spacecraft: A Chronology, Volume I, Through November 7, 1962*. NASA SP-4009, 1969.

Morse, Mary Louise, and Jean Kernahan Bays. *The Apollo Spacecraft: A Chronology, Volume II, November 8, 1962–September 30, 1964*. NASA SP-4009, 1973.

Brooks, Courtney G., and Ivan D. Ertel. *The Apollo Spacecraft: A Chronology, Volume III, October 1, 1964–January 20, 1966*. NASA SP-4009, 1973.

Ertel, Ivan D., and Roland W. Newkirk, with Courtney G. Brooks. *The Apollo Spacecraft: A Chronology, Volume IV, January 21, 1966–July 13, 1974*. NASA SP-4009, 1978.

*Astronautics and Aeronautics, 1968: Chronology of Science, Technology, and Policy*. NASA SP-4010, 1969.

Newkirk, Roland W., and Ivan D. Ertel, with Courtney G. Brooks. *Skylab: A Chronology*. NASA SP-4011, 1977.

Van Nimmen, Jane, and Leonard C. Bruno, with Robert L. Rosholt. *NASA Historical Data Book, Volume I: NASA Resources, 1958–1968*. NASA SP-4012, 1976, rep. ed. 1988.

Ezell, Linda Neuman. *NASA Historical Data Book, Volume II: Programs and Projects, 1958–1968*. NASA SP-4012, 1988.

Ezell, Linda Neuman. *NASA Historical Data Book, Volume III: Programs and Projects, 1969–1978*. NASA SP-4012, 1988.

Gawdiak, Ihor Y., with Helen Fedor, compilers. *NASA Historical Data Book, Volume IV: NASA Resources, 1969–1978*. NASA SP-4012, 1994.

Rumerman, Judy A., compiler. *NASA Historical Data Book, 1979–1988: Volume V, NASA Launch Systems, Space Transportation, Human Spaceflight, and Space Science*. NASA SP-4012, 1999.

- Rumerman, Judy A., compiler. *NASA Historical Data Book, Volume VI: NASA Space Applications, Aeronautics and Space Research and Technology, Tracking and Data Acquisition/Space Operations, Commercial Programs, and Resources, 1979–1988*. NASA SP-2000-4012, 2000.
- Astronautics and Aeronautics, 1969: Chronology of Science, Technology, and Policy*. NASA SP-4014, 1970.
- Astronautics and Aeronautics, 1970: Chronology of Science, Technology, and Policy*. NASA SP-4015, 1972.
- Astronautics and Aeronautics, 1971: Chronology of Science, Technology, and Policy*. NASA SP-4016, 1972.
- Astronautics and Aeronautics, 1972: Chronology of Science, Technology, and Policy*. NASA SP-4017, 1974.
- Astronautics and Aeronautics, 1973: Chronology of Science, Technology, and Policy*. NASA SP-4018, 1975.
- Astronautics and Aeronautics, 1974: Chronology of Science, Technology, and Policy*. NASA SP-4019, 1977.
- Astronautics and Aeronautics, 1975: Chronology of Science, Technology, and Policy*. NASA SP-4020, 1979.
- Astronautics and Aeronautics, 1976: Chronology of Science, Technology, and Policy*. NASA SP-4021, 1984.
- Astronautics and Aeronautics, 1977: Chronology of Science, Technology, and Policy*. NASA SP-4022, 1986.
- Astronautics and Aeronautics, 1978: Chronology of Science, Technology, and Policy*. NASA SP-4023, 1986.
- Astronautics and Aeronautics, 1979–1984: Chronology of Science, Technology, and Policy*. NASA SP-4024, 1988.
- Astronautics and Aeronautics, 1985: Chronology of Science, Technology, and Policy*. NASA SP-4025, 1990.
- Noordung, Hermann. *The Problem of Space Travel: The Rocket Motor*. Edited by Ernst Stuhlinger and J. D. Hunley, with Jennifer Garland. NASA SP-4026, 1995.
- Astronautics and Aeronautics, 1986–1990: A Chronology*. NASA SP-4027, 1997.
- Astronautics and Aeronautics, 1990–1995: A Chronology*. NASA SP-2000-4028, 2000.

### **Management Histories, NASA SP-4100**

- Rosholt, Robert L. *An Administrative History of NASA, 1958–1963*. NASA SP-4101, 1966.
- Levine, Arnold S. *Managing NASA in the Apollo Era*. NASA SP-4102, 1982.
- Roland, Alex. *Model Research: The National Advisory Committee for Aeronautics, 1915–1958*. NASA SP-4103, 1985.
- Fries, Sylvia D. *NASA Engineers and the Age of Apollo*. NASA SP-4104, 1992.
- Glennan, T. Keith. *The Birth of NASA: The Diary of T. Keith Glennan*. J. D. Hunley, editor. NASA SP-4105, 1993.

Seamans, Robert C., Jr. *Aiming at Targets: The Autobiography of Robert C. Seamans, Jr.* NASA SP-4106, 1996.

Garber, Stephen J., *Looking Backward, Looking Forward: Forty Years of U.S. Human Spaceflight Symposium.* NASA SP-4107, 2002.

### **Project Histories, NASA SP-4200**

Swenson, Loyd S., Jr., James M. Grimwood, and Charles C. Alexander. *This New Ocean: A History of Project Mercury.* NASA SP-4201, 1966; rep. ed. 1998.

Green, Constance McLaughlin, and Milton Lomask. *Vanguard: A History.* NASA SP-4202, 1970; rep. ed. Smithsonian Institution Press, 1971.

Hacker, Barton C., and James M. Grimwood. *On Shoulders of Titans: A History of Project Gemini.* NASA SP-4203, 1977.

Benson, Charles D., and William Barnaby Faherty. *Moonport: A History of Apollo Launch Facilities and Operations.* NASA SP-4204, 1978.

Brooks, Courtney G., James M. Grimwood, and Loyd S. Swenson, Jr. *Chariots for Apollo: A History of Manned Lunar Spacecraft.* NASA SP-4205, 1979.

Bilstein, Roger E. *Stages to Saturn: A Technological History of the Apollo/Saturn Launch Vehicles.* NASA SP-4206, 1980, rep. ed. 1997.

SP-4207 not published.

Compton, W. David, and Charles D. Benson. *Living and Working in Space: A History of Skylab.* NASA SP-4208, 1983.

Ezell, Edward Clinton, and Linda Neuman Ezell. *The Partnership: A History of the Apollo-Soyuz Test Project.* NASA SP-4209, 1978.

Hall, R. Cargill. *Lunar Impact: A History of Project Ranger.* NASA SP-4210, 1977.

Newell, Homer E. *Beyond the Atmosphere: Early Years of Space Science.* NASA SP-4211, 1980.

Ezell, Edward Clinton, and Linda Neuman Ezell. *On Mars: Exploration of the Red Planet, 1958–1978.* NASA SP-4212, 1984.

Pitts, John A. *The Human Factor: Biomedicine in the Manned Space Program to 1980.* NASA SP-4213, 1985.

Compton, W. David. *Where No Man Has Gone Before: A History of Apollo Lunar Exploration Missions.* NASA SP-4214, 1989.

Naugle, John E. *First Among Equals: The Selection of NASA Space Science Experiments.* NASA SP-4215, 1991.

Wallace, Lane E. *Airborne Trailblazer: Two Decades with NASA Langley's Boeing 737 Flying Laboratory.* NASA SP-4216, 1994.

Butrica, Andrew J., ed. *Beyond the Ionosphere: Fifty Years of Satellite Communication.* NASA SP-4217, 1997.

Butrica, Andrew J. *To See the Unseen: A History of Planetary Radar Astronomy.* NASA SP-4218, 1996.

Mack, Pamela E., ed. *From Engineering Science to Big Science: The NACA and NASA Collier Trophy Research Project Winners.* NASA SP-4219, 1998.

- Reed, R. Dale, with Darlene Lister. *Wingless Flight: The Lifting Body Story*. NASA SP-4220, 1997.
- Heppenheimer, T. A. *The Space Shuttle Decision: NASA's Search for a Reusable Space Vehicle*. NASA SP-4221, 1999.
- Hunley, J. D., ed. *Toward Mach 2: The Douglas D-558 Program*. NASA SP-4222, 1999.
- Swanson, Glen E., ed. "Before this Decade is Out . . .": *Personal Reflections on the Apollo Program*. NASA SP-4223, 1999.
- Tomayko, James E. *Computers Take Flight: A History of NASA's Pioneering Digital Fly-by-Wire Project*. NASA SP-2000-4224, 2000.
- Morgan, Clay. *Shuttle-Mir: The U.S. and Russia Share History's Highest Stage*. NASA SP-2001-4225, 2001.
- Mudgway, Douglas J. *Uplink-Downlink: A History of the Deep Space Network, 1957–1997*. NASA SP-2001-4227, 2002.

### **Center Histories, NASA SP-4300**

- Rosenthal, Alfred. *Venture into Space: Early Years of Goddard Space Flight Center*. NASA SP-4301, 1985.
- Hartman, Edwin P. *Adventures in Research: A History of Ames Research Center, 1940–1965*. NASA SP-4302, 1970.
- Hallion, Richard P. *On the Frontier: Flight Research at Dryden, 1946–1981*. NASA SP-4303, 1984.
- Muenger, Elizabeth A. *Searching the Horizon: A History of Ames Research Center, 1940–1976*. NASA SP-4304, 1985.
- Hansen, James R. *Engineer in Charge: A History of the Langley Aeronautical Laboratory, 1917–1958*. NASA SP-4305, 1987.
- Dawson, Virginia P. *Engines and Innovation: Lewis Laboratory and American Propulsion Technology*. NASA SP-4306, 1991.
- Dethloff, Henry C. "Suddenly Tomorrow Came . . .": *A History of the Johnson Space Center*. NASA SP-4307, 1993.
- Hansen, James R. *Spaceflight Revolution: NASA Langley Research Center from Sputnik to Apollo*. NASA SP-4308, 1995.
- Wallace, Lane E. *Flights of Discovery: 50 Years at the NASA Dryden Flight Research Center*. NASA SP-4309, 1996.
- Herring, Mack R. *Way Station to Space: A History of the John C. Stennis Space Center*. NASA SP-4310, 1997.
- Wallace, Harold D., Jr. *Wallop Station and the Creation of the American Space Program*. NASA SP-4311, 1997.
- Wallace, Lane E. *Dreams, Hopes, Realities: NASA's Goddard Space Flight Center, The First Forty Years*. NASA SP-4312, 1999.
- Dunar, Andrew J., and Stephen P. Waring. *Power to Explore: A History of the Marshall Space Flight Center*. NASA SP-4313, 1999.
- Bugos, Glenn E. *Atmosphere of Freedom: Sixty Years at the NASA Ames Research Center*. NASA SP-2000-4314, 2000.

## **General Histories, NASA SP-4400**

Corliss, William R. *NASA Sounding Rockets, 1958–1968: A Historical Summary*. NASA SP-4401, 1971.

Wells, Helen T., Susan H. Whiteley, and Carrie Karegeannes. *Origins of NASA Names*. NASA SP-4402, 1976.

Anderson, Frank W., Jr. *Orders of Magnitude: A History of NACA and NASA, 1915–1980*. NASA SP-4403, 1981.

Sloop, John L. *Liquid Hydrogen as a Propulsion Fuel, 1945–1959*. NASA SP-4404, 1978.

Roland, Alex. *A Spacefaring People: Perspectives on Early Spaceflight*. NASA SP-4405, 1985.

Bilstein, Roger E. *Orders of Magnitude: A History of the NACA and NASA, 1915–1990*. NASA SP-4406, 1989.

Logsdon, John M., ed., with Linda J. Lear, Jannelle Warren-Findley, Ray A. Williamson, and Dwayne A. Day. *Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program, Volume I, Organizing for Exploration*. NASA SP-4407, 1995.

Logsdon, John M., ed., with Dwayne A. Day and Roger D. Launius. *Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program, Volume II, Relations with Other Organizations*. NASA SP-4407, 1996.

Logsdon, John M., ed., with Roger D. Launius, David H. Onkst, and Stephen J. Garber. *Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program, Volume III, Using Space*. NASA SP-4407, 1998.

Logsdon, John M., gen. ed., with Ray A. Williamson, Roger D. Launius, Russell J. Acker, Stephen J. Garber, and Jonathan L. Friedman. *Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program, Volume IV, Accessing Space*. NASA SP-4407, 1999.

Logsdon, John M., gen. ed., with Amy Paige Snyder, Roger D. Launius, Stephen J. Garber, and Regan Anne Newport. *Exploring the Unknown: Selected Documents in the History of the U.S. Civil Space Program, Volume V, Exploring the Cosmos*. NASA SP-2001-4407, 2001.

Siddiqi, Asif A. *Challenge to Apollo: The Soviet Union and the Space Race, 1945–1974*. NASA SP-2000-4408, 2000.

## **Monographs in Aerospace History, NASA SP-4500**

Launius, Roger D., and Aaron K. Gillette, comps. *Toward a History of the Space Shuttle: An Annotated Bibliography*. Monograph in Aerospace History, No. 1, 1992. Out of print.

Launius, Roger D., and J. D. Hunley, comps. *An Annotated Bibliography of the Apollo Program*. Monograph in Aerospace History, No. 2, 1994.

Launius, Roger D. *Apollo: A Retrospective Analysis*. Monograph in Aerospace History, No. 3, 1994.

Hansen, James R. *Enchanted Rendezvous: John C. Houbolt and the Genesis of the Lunar-Orbit Rendezvous Concept*. Monograph in Aerospace History, No. 4, 1995.

Gorn, Michael H. *Hugh L. Dryden's Career in Aviation and Space*. Monograph in Aerospace History, No. 5, 1996.

Powers, Sheryll Goecke. *Women in Flight Research at NASA Dryden Flight Research Center from 1946 to 1995*. Monograph in Aerospace History, No. 6, 1997.

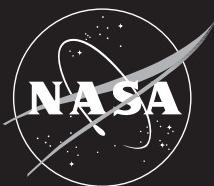
- Portree, David S. F., and Robert C. Trevino. *Walking to Olympus: An EVA Chronology*. Monograph in Aerospace History, No. 7, 1997.
- Logsdon, John M., moderator. *Legislative Origins of the National Aeronautics and Space Act of 1958: Proceedings of an Oral History Workshop*. Monograph in Aerospace History, No. 8, 1998.
- Rumerman, Judy A., comp. *U.S. Human Spaceflight, A Record of Achievement 1961–1998*. Monograph in Aerospace History, No. 9, 1998.
- Portree, David S. F. *NASA's Origins and the Dawn of the Space Age*. Monograph in Aerospace History, No. 10, 1998.
- Logsdon, John M. *Together in Orbit: The Origins of International Cooperation in the Space Station*. Monograph in Aerospace History, No. 11, 1998.
- Phillips, W. Hewitt. *Journey in Aeronautical Research: A Career at NASA Langley Research Center*. Monograph in Aerospace History, No. 12, 1998.
- Braslow, Albert L. *A History of Suction-Type Laminar-Flow Control with Emphasis on Flight Research*. Monograph in Aerospace History, No. 13, 1999.
- Logsdon, John M., moderator. *Managing the Moon Program: Lessons Learned From Apollo*. Monograph in Aerospace History, No. 14, 1999.
- Perminov, V. G. *The Difficult Road to Mars: A Brief History of Mars Exploration in the Soviet Union*. Monograph in Aerospace History, No. 15, 1999.
- Tucker, Tom. *Touchdown: The Development of Propulsion Controlled Aircraft at NASA Dryden*. Monograph in Aerospace History, No. 16, 1999.
- Maisel, Martin D., Demo J. Giulianetti, and Daniel C. Dugan. *The History of the XV-15 Tilt Rotor Research Aircraft: From Concept to Flight*. NASA SP-2000-4517, 2000.
- Jenkins, Dennis R. *Hypersonics Before the Shuttle: A Concise History of the X-15 Research Airplane*. NASA SP-2000-4518, 2000.
- Chambers, Joseph R. *Partners in Freedom: Contributions of the Langley Research Center to U.S. Military Aircraft in the 1990s*. NASA SP-2000-4519, 2000.
- Waltman, Gene L. *Black Magic and Gremlins: Analog Flight Simulations at NASA's Flight Research Center*. NASA SP-2000-4520, 2000.
- Portree, David S. F. *Humans to Mars: Fifty Years of Mission Planning, 1950–2000*. NASA SP-2001-4521, 2001.
- Thompson, Milton O., with J. D. Hunley. *Flight Research: Problems Encountered and What They Should Teach Us*. NASA SP-2000-4522, 2000.
- Tucker, Tom. *The Eclipse Project*. NASA SP-2000-4523, 2000.
- Siddiqi, Asif A. *Deep Space Chronicle: A Chrononology of Deep Space and Planetary Probes 1958–2000*. NASA SP-2002-4524, 2002.
- Merlin, Peter W. *Mach 3+: NASA/USAF YF-12 Flight Research, 1969–1979*. NASA SP-2001-4525, 2001.
- Anderson, Seth B. *Memoirs of an Aeronautical Engineer: Flight Test at Ames Research Center: 1940–1970*. NASA SP-2002-4526, 2002.
- Renstrom, Arthur G. *Wilbur and Orville Wright: A Bibliography Commemorating the One-Hundredth Anniversary of the First Powered Flight on December 17, 1903*. NASA SP-2002-4527, 2002.

There is no monograph 28.

Chambers, Joseph R. *Concept to Reality: Contributions of the NASA Langley Research Center to U.S. Civil Aircraft of the 1990s*. NASA SP-2003-4529, 2003.

Peebles, Curtis, ed. *The Spoken Word: Recollections of Dryden History, The Early Years*. NASA SP-2003-4530, 2003.

Jenkins, Dennis R., Tony Landis, and Jay Miller. *American X-Vehicles: An Inventory—X-1 to X-50*. NASA SP-2003-4531, 2003.



A Joint Publication of the

**U.S. Centennial of Flight Commission and the  
National Aeronautics and Space Administration**

Monographs in Aerospace History Number 32

**NASA Publication SP-2003-4532**

National Aeronautics and Space Administration  
Office of External Relations  
NASA History Office  
NASA Headquarters  
Washington, DC 20546